



STAFFORDSHIRE COUNTY COUNCIL.



ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

GEORGE REID, M.D., D.P.H.,

FOR THE YEAR 1906.



STAFFORD :

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INDEX.

	Page.		Pa
Amblecote—		Brierley Hill— <i>continued.</i>	
Enteric fever in	47	Excrement and refuse disposal	
Area and population	19	in	71
Audley—		Infant mortality in	25
Diphtheria in	41	Milk depôts advocated	89
Bakehouses	90	Scarlet fever in	38
Bacteriological examinations in		Brownhills—	
suspected cases of diphtheria,		Disinfection in	56
enteric fever, and phthisis, &c.	7	Isolation hospital accommoda-	
Biddulph—		tion in	56
Diphtheria in	41	Water supply of... ..	84
Infant mortality in	29	Burslem—	
Overcrowding in	64	Birth-rate in	20
Phthisis, notification of, in ...	53	Diphtheria and antitoxin treat-	
Sewage disposal at	79	ment	42
Bilston—		Excrement and refuse disposal	
Enteric fever in	47	in	72
Diphtheria and bacteriological		Infant mortality in	25
examination	41	Sewage disposal at	5
Excrement and refuse disposal		Bye-laws	93
at	71	Canal Boats	90
High death-rate in	23	Cannock—	
House accommodation in	64	Diphtheria and antitoxin treat-	
Infant mortality in	25	ment	42
Measles in	36	Infant mortality in	33
New isolation hospital... ..	55	Influenza in	52
New sewage disposal works ...	3	Mortuary, Provision of, advo-	
Birmingham Tame and Rea		cated	92
sewage works	2	Proposed joint smallpox hos-	
Births in urban and rural		pital for Cannock Urban and	
districts	20	Rural districts	56
Blore Heath (Rural)—		Puerperal fever in	51
Birth-rate in	20	Cannock (Rural)—	
Regulations adopted under		Infant mortality in	33
Dairies, Cowsheds, and Milk-		Isolation hospital accommoda-	
shops Order	89	tion in	61
Brierley Hill—		Local Government Board	
Birth-rate in	20	Inquiry at Bushbury... ..	5
Bye-laws in	93	Regulations adopted under	
Diarrhœa in	48	Dairies, Cowsheds, and Milk-	
		shops Order	89

	Page.		Page.
Cannock (Rural)— <i>continued</i> .		Erysipelas	51
Sewerage and sewage disposal		Excrement & refuse disposal	71—78
at Cheslyn Hay, Brewood,		Factories and workshops	91
Ford Houses, Bushbury, Sneyd		Fenton—	
Lane, and Great Wyrley	80—82	Birth-rate in	20
Cheadle (Rural)—		Byelaws in	93
Cowsheds in	89	Death-rate in	23
Diphtheria and antitoxin treat-		Diphtheria and cost of anti-	
ment	45	toxin treatment	42
Isolation hospital accommoda-		Excrement and refuse disposal	
tion in	7, 61	in	73
Cholera	51	Infant mortality in	30
Consultations	17	Notification of infectious cases	
Coseley—		by school teachers	56
Diphtheria and antitoxin treat-		Sewage disposal at	5
ment	42	Water supply of... ..	84
Diseased meat prosecution in	87	Gnosall (Rural)—	
Excrement and refuse disposal		Puerperal fever in	51
in	72	Handsworth—	
House accommodation in	64	Diarrhoea in	49
Infant mortality in	29	Excrement disposal in... ..	73
Measles, notification of by school		House accommodation in	65
teachers, in	36	Infant mortality in	30
Scarlet fever in	39	Isolation hospital accommoda-	
Water supply of... ..	84	tion in	57
Dairies, Cowsheds, and Milkshops	88	Tuberculous diseases in	53
Darlaston—		Hanley (C.B.)—	
Disinfection in	56	Sewage disposal at	4
Enteric fever in... ..	47	Heath Town—	
Excrement and refuse disposal		Death-rate in	23
in	72	Excrement and refuse disposal	
High death-rate in	23	in	74
Infant mortality in	26	Factory inspection in	91
Isolation hospital accommoda-		Garden suburb for	67
tion in	56	House accommodation in	67
Diarrhoea	48—51	Infant mortality in	33
Diphtheria and membranous croup	41—45	Offensive trade in	92
Diseases of the respiratory organs	52	Phthisis in	54
Disinfection	55—62	Hygiene for school teachers, classes	
Deaths in urban and rural		in	13—17
districts	21	Housing of the working classes	64—71
Eccleshall (Rural)		Infant mortality	12, 24—34
Infant mortality in	33	Infant mortality and factory labour	33
Enteric fever	46—48		

	Page.		Page.
Influenza	52	Newcastle—	
Insanitary dwellings and over-		Ambulance needed for removal	
crowding	64—71	of enteric cases	58
Isolation and disinfection ...	55—62	Diarrhoea in	50
Isolation Hospital Acts	7	Diphtheria and antitoxin treat-	
Kidsgrove—		ment	43
Diphtheria in	43	House accommodation in ...	69
Kingswinford (Rural)—		Infant mortality in	31
Sewerage of	83	Isolation hospital accommoda-	
Leek—		tion in	58
Birth-rate in	21	Refuse removal in	75
Isolation hospital accommoda-		Sewage disposal at	5
tion in	57	Newcastle (Rural)—	
Phthisis, notification of deaths		Sewage disposal at Madeley ...	83
from, in... ..	54	Offensive trades	92
Vaccination in	63	Oldbury (Worcestershire)—	
Lichfield (City)—		Local Government Board In-	
Bye-laws in	93	quiry at	5
Joint isolation hospital	7	Sewage disposal works	4
Water supply of... ..	84	Overcrowding	64—71
Lichfield (Rural)		Perry Barr—	
Birth-rate in	20	Infant mortality in	28
Death-rate in	23	Phthisis	53
Diphtheria in	45	Privy system	17
Sewage disposal at Chase		Puerperal fever	51
Terrace	83	Quarry Bank—	
Local Government Board In-		Birth-rate in	21
quiries	5	Excrement and refuse disposal	
Lodging-houses	90	in	75
Longton—		House accommodation in ...	69
Cowsheds in	89	Infant mortality in	31
Enteric fever in	48	Isolation hospital accommoda-	
High death-rate in	23	tion in	58
Infant mortality in	26	Phthisis and compulsory noti-	
Re-sewering of Dresden	79	fication	54
Sewage disposal at	5	Refuse disposal	71—78
Mayfield (Rural)—		Reports, special	18
Water-supply in	85	Respiratory organs, diseases of the	52
Measles	36—38	Rivers pollution	2
Midwives Act, 1902	9—12	Rowley Regis—	
Mortuaries	92	Diseased meat prosecution in	87
		Excrement and refuse disposal	
		in	76
		Factory and Workshops Act... ..	91
		Influenza in	52

	Page.		Page.
Rowley Regis— <i>continued</i> .		Small-pox	35
Isolation hospital accommoda- tion in	58	Small-pox hospital provision ...	7
Vaccination in	63	Smallthorne—	
Rugeley—		Birth-rate in	21
Disinfection in	58	Death-rate in	23
Factory and Workshops Act...	91	Diphtheria and antitoxin treat- ment	43
Sewage disposal at	79	Infant mortality in	33
Sanitary Committee—		Isolation hospital accommoda- tion in	59
General work of... ..	6	Smethwick—	
Summary of the year's work of	2	Diphtheria and bacteriological examinations	43
Scarlet fever	38—41	Infant mortality in	33
Sedgley—		Influenza in	52
Birth-rate in	21	Isolation hospital accommoda- tion in	59
Bye-laws in	94	Phthisis, voluntary notification of, in	54
Diphtheria in	43	Stafford—	
Excrement and refuse disposal in	76	Birth-rate in	21
Infant hygiene, &c., teaching of in schools, advocated ...	32	Death-rate in	23
Insanitary dwellings and over- crowding in	70	Diseased meat prosecution in...	87
Isolation hospital accommoda- tion in	59	Factory and Workshops Act...	91
Water-supply of	84	Isolation hospital accommoda- tion in	59
Whooping cough in	46	Scarlet fever in	40
Seisdon (Rural)—		Stoke-on-Trent—	
Diphtheria in	45	Bye laws in	94
Drainage and water-supply of Kinver	86	Death-rate in	23
Kinver sewage disposal pro- ceedings under Rivers Pollu- tion Acts	5	Diphtheria and cost of antitoxin treatment	44
Sewage disposal—		Excrement and refuse disposal in	77
Royal Commission on	6	Infant mortality in	33
Sewerage and sewage disposal	79—83	Stone—	
Short Heath—		Bye-laws in	94
Birth-rate in	21	Diphtheria and antitoxin treat- ment	44
Death-rate in	23	Sewage disposal at	79
Factory and Workshops Act...	91	Stone (Rural)	
Infant mortality in	33	Diphtheria in	45
Refuse disposal in	77	Water-supply of Oulton and Rough Close	86
Slaughter-houses and meat inspec- tion	87		

	Page.		Page.
Table—		Tamworth (Rural)—	
Showing comparative birth-rates 1889-1906... ..	20	Influenza in	52
Showing comparative general zymotic mortality, 1889-1906	35	Phthisis, notification of ...	55
Showing death-rates from diphtheria and membranous croup, 1889-1906	41	Water supply of Croxall and Edingale	86
Showing death-rates from measles, 1889-1906	36	Tettenhall—	
Showing death-rates from scarlet fever, 1889-1906	38	Excrement and refuse disposal in	77
Showing death-rates from whooping cough, 1889-1906...	46	Tipton—	
Showing death-rates in urban and rural districts, 1889-1906	22	Enteric fever in	48
Showing diarrhoea death-rates, 1889-1906	48	Excrement and refuse disposal in	77
Showing enteric fever death-rates, 1889-1906	47	Meat seizure in	87
Showing high death-rate districts	23	Puerperal fever in	51
Showing high infant mortality towns	24	Sewage disposal at	4
Showing population in urban and rural districts	19	Vaccination in	63
Showing rates of infant mortality in groups of towns in Staffordshire, 1881-1906 ...	34	Trade wastes	6
Showing working of bacteriological examination scheme	8	Tunstall—	
Tables, General	96-143	Excrement and refuse disposal in	78
Showing infantile deaths at different age periods...	106-109	Infant mortality in	28
Showing infectious cases notified and isolated in hospital in 1906	110-124	Isolation hospital accommodation for... ..	60
Showing summary of Sanitary Inspector's work in 1906	125-143	Phthisis, notification of, advocated	54
Showing vital statistics for 1906	96-105	Sewage disposal at	5
Showing working of the Midwives Act	9-11	Tutbury (Rural)—	
Tamworth—		Excrement and refuse disposal in	78
Bye-laws in	94	Milk-supply in	89
House accommodation in ...	70	Uttoxeter—	
Influenza in	52	Sewage disposal at	80
Removal of weirs at	9	Water-supply of	85
		Uttoxeter (Rural)—	
		Dairies and Cowsheds, bye-laws advocated	90
		Isolation hospital accommodation in	62
		Vaccination	62
		Walsall (C.B.)—	
		Sewage disposal at	3

	Page.		Page.
Walsall (Rural)		Willenhall-- <i>continued.</i>	
Birth-rate in	21	Examination of dairy cattle	
Infant mortality in	33	for tubercle	54
Sewerage and sewage disposal		Factory and Workshops Act...	92
scheme for Streetley... ..	83	Infantile diarrhœa in	51
Water-supply	17, 83—87	Isolation hospital accommoda-	
Wednesbury—		tion in	60
Diphtheria and antitoxin treat-		Measles in	37
ment	44	Puerperal fever in	51
Influenza in	52	Wolstanton—	
Vaccination in	63	Diphtheria and antitoxin treat-	
Wednesfield—		ment	44
Infant mortality in	29	Isolation hospital accommoda-	
Isolation hospital accommoda-		tion in	61
tion in	60	Local Government Board In-	
Unsound meat in	88	quiry at... ..	5
Whooping Cough	45	Wolverhampton (C.B.)	
Willenhall—		Local Government Board In-	
Birth-rate in	20	quiry at	5
Death-rate in	23	Zymotic death-rate, general ...	34
		Zymotic death-rate, special	35—51
		Zymotic disease prevention	55—64

STAFFORDSHIRE COUNTY COUNCIL.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH,

Presented to the Council at the Quarterly Meeting,
November 5th, 1907.

IN this, my Eighteenth Annual Report, I propose to adhere, so far as collating the Reports of District Medical Officers of Health is concerned, to the general plan adopted originally, and deal with the various reports under subject headings, in place of devoting a special summary to each, as is done in some county reports. Were it not for the fact that the Administrative County contains so many sanitary districts, the latter plan would, possibly, be the better, but, to adopt it under the circumstances, and, at the same time, give sufficient prominence to the more important features of each report under review, would necessitate needless repetition, many remarks being equally applicable to several districts.

I have again indexed the report, so that each question dealt with, whether of general or special significance, may at once be referred to.

I take this opportunity of thanking the Medical Officers of Health, who, almost without exception, have fallen in with my suggestions as to the introduction into their reports of certain details which, from the point of view of the County Council are of great value.

In the "Summary of the Year's Work of the Sanitary Committee of the County Council," I have endeavoured to convey some idea of what has been done during the year in public health work, more with the view of indicating the lines on which the Committee are proceeding than in the hope that such a condensed account can convey an adequate idea either of the work itself or the good which has attended it.

G.R.

SUMMARY OF THE YEAR'S WORK OF THE SANITARY COMMITTEE
OF THE COUNTY COUNCIL, WITH GENERAL COMMENTS ON
PUBLIC HEALTH ADMINISTRATION.

As regards the summary of the work of the Sanitary Committee, I would point out that the year embraces a period of twelve months ending June 30th, 1907, as the last summary covered the ground up to the end of June, 1906. So far as that portion of the report which deals with the reports of District Medical Officers of Health is concerned, the period covered embraces 1906 only.

The routine work under the Rivers Pollution Prevention Acts has proceeded on former lines. The systematic work of inspecting existing sewage disposal works, and the collection of samples of sewage effluents, and of river water at fixed points on streams, has been conducted uninterruptedly as far as possible. This year, 205 analyses have been made, comprising the following :—Sewage effluents, 118; river waters, 76; well waters, 8; and trade wastes, 3.

It is customary to call the Sanitary Committee's attention at the time to any irregularities which are noted in the management of sewage works, and the responsible Authorities in such cases are invariably communicated with.

To comment at all fully, however, on the action which has been taken during the year in the matter of rivers pollution would require more space than can well be devoted to one subject in a summary of this description. Still, it may be useful to refer, shortly, to the more important questions in this department of the Sanitary Committee's work which have received attention.

I am pleased to be able to state that the improvement previously recorded in the condition of the river Tame at the point where it re-enters the County from Warwickshire is maintained, a circumstance which is mainly attributable to continued progress on the part of the Birmingham Tame and Rea District Drainage Board in improving and extending the sewage disposal works of that Authority. Year by year the wisdom of the policy adopted by that Board of extending

the area of the biological filters becomes more and more apparent. This work has been in rapid progress throughout the year, and over 20 acres of such filters will soon be in actual operation.

It has not been found necessary to hold a meeting of the Joint Committee of this Council and the Birmingham Corporation—the paramount Authority of the Birmingham Tame and Rea District Drainage Board—but, should occasion arise, this Committee will again meet ; meanwhile, it is satisfactory to know that it still exists, and can be called together at any moment.

In view of the progress just recorded, it is all the more incumbent upon Authorities in this County higher up stream to proceed without delay with the improved sewage disposal schemes which most of them have either in hand or under consideration. The Sanitary Committee of the County Council are fully alive to the position, and, during the year which has passed, strong pressure has been brought to bear on the Authorities in question.

It is satisfactory to be able to record that in the case of one of these districts, namely, Bilston, the new works are now rapidly approaching completion.

As regards the County Borough of Walsall, the situation, so far as actual pollution is concerned, is unchanged, but the question has not been allowed to rest. Through the death of Mr. Middleton, the Borough Engineer, after a long illness, the scheme which he was about to present to the Corporation for approval was temporarily put on one side in order that his successor might have time to acquire a thorough knowledge of the situation. This delay, as it turns out, has proved advantageous, as the knowledge meanwhile acquired from the continued working of the experimental plant, under somewhat altered conditions, has afforded valuable information regarding the type of plant likely to yield the best results, having regard to the special character of the Walsall sewage. From time to time, while this work has been in progress, I have been in communication with the new Borough Engineer, and I understand that the amended

plans will be completed by August next for submission to the Corporation previous to being forwarded to the Local Government Board.

As regards Oldbury, another serious offender at the head of the Tame, the scheme referred to in my last Annual Report was the subject of a Local Government Board enquiry held in July, 1906, and I understand the Board have since approved the plans and sanctioned the raising by loan of £38,300 to carry out the work. Subsequent to the proceedings instituted by the County Council under the Rivers Pollution Prevention Acts, considerable delay occurred in framing this scheme for improving the sewage disposal works, owing to necessary negotiations between the District Council and a firm of chemical manufacturers whose trade waste is discharged into the sewers. For this reason, the County Council assented to an extension of the Order of the Court for a period of twelve months, dating from June, 1906. It is disappointing to find that, although this period has expired, the new works have not yet been started, and, under the circumstances, the County Council will probably not assent to any further suspension of the Order.

In my summary for last year, I referred to the fact that plans of sewage disposal works for Tipton, another polluting district on the upper Tame, had practically been completed. I regret to say that, although these plans were subsequently approved by the District Council for submission to the Local Government Board, at a subsequent meeting of the Council this resolution was rescinded, and the position, as regards remedying the pollution, remains as before. It would seem, therefore, that proceedings will have to be taken against this Authority to compel them to construct efficient sewage disposal works.

In the north of the County very satisfactory progress has been made. The new works at Hanley are being pushed on, and already the dry-weather flow of sewage is being satisfactorily dealt with. The excellent results obtained from the experimental plant—upon the lines of which the main works are being constructed—are also being obtained from

that section of the main works already in use, and, with continued efficient management, I am confident this high standard of work will be maintained.

The new works at Newcastle, which were brought into operation a little over a year ago, continue to give good results.

The extensive plant at Burslem is in an advanced state, and I am hopeful that at least two of the filters will be brought into use in the autumn.

At Tunstall, Longton, and Fenton, new works are still in process of construction; in the first-mentioned case, however, because of the slow progress which had been made, the Sanitary Committee directed that a letter of remonstrance should be sent to the District Council, and this appears to have had the desired result.

In my last year's summary, I referred to the fact that unsuccessful proceedings had been instituted against the Seisdon Rural District Council because of pollution of the Stour by the sewage of the village of Kinver, and that an appeal had been lodged against the verdict of the County Court Judge. I am happy to say that the County Council succeeded in this appeal and obtained an Order in the High Court, the operation of which was suspended for six months. Power, however, was given to the District Council to appeal against this decision, and an appeal has been lodged by that body which has not yet been heard.

During the year, Local Government Board enquiries relating to matters of sewage disposal have been held at Oldbury, Wolverhampton, Wolstanton, and Bushbury, a populous area in the Cannock Rural District, near Wolverhampton.

As regards the other work under this heading, besides numerous communications with Authorities and consultations with their officers, 12 special reports have been presented to the Sanitary Committee during the year, dealing with questions relating to river pollution. Space, however, will not allow of more than an enumeration of the districts, or questions, to which these reports had reference, as follows :—Burslem,

Darlaston, Kids Grove, Oldbury, Tamworth, Tunstall, Walsall (C.B.), Wolstanton Urban Districts, and Cannock and Leek Rural Districts; also Birmingham Tame and Rea Sewage Disposal Works, Mond Gas Works, and River Stour pollution.

In this summary for the past four years I have suggested that the County Council—in view of the Third Report of the Royal Commission on Sewage Disposal and possible legislation on the subject of dealing with trade wastes—would do well to suspend any further action under the Sections of the Acts dealing with such matters. So far, the Government have not yet brought forward any Bill based upon the report referred to, and matters are, unfortunately, in the same unsettled state as heretofore.

In this connection, on the initiative of the Staffordshire County Council, an influential Joint Committee, representative of County Councils and the Councils of County Boroughs in the Trent Watershed, was formed two years ago to watch the progress of events and take such steps as may be deemed necessary in the interest of these Authorities. Several meetings of this Joint Committee were held, and, a general policy having been arrived at, in due course—should occasion arise—steps will be taken to bring the views of the Joint Committee before the notice of those who may be responsible for the framing of any legislative measure dealing with this question.

As regards the general work of the Sanitary Committee, reports have been presented, as the outcome of special inspections and inquiries relating to matters affecting the following districts, namely:—Burslem, Tipton, and Wednesfield Urban Districts, and Stone and Tutbury Rural Districts. In addition to these special reports, many matters have been dealt with arising out of my Annual Report for 1905, and affecting 25 districts, as follows:—Amblecote, Audley, Brierley Hill, Brownhills, Cannock, Coseley, Darlaston, Heath Town, Quarry Bank, Sedgley, Short Heath, Smallthorne, Stone, Tettenhall, Tipton, Wednesfield, and Willenhall Urban Districts, and Cheadle, Gnosall, Leek, Seisdon, Stoke-on-Trent, Stone, Tutbury, and Uttoxeter Rural Districts.

In my last year's summary, I called attention to the fact that an application had been received from the Lichfield Urban and Rural Joint Hospital Committee for a contribution, under the Isolation Hospitals Act, towards the cost of their hospital, but that the County Council determined not to make such contribution because the accommodation provided did not come up to the required standard. Subsequently, however, a second application was made for a contribution towards the small-pox hospital provided by the same Authority, and this the County Council decided to grant.

A similar request from the Cheadle Rural District Council in respect of their new general isolation hospital was also not acceded to at first, because, in certain respects, the provision made came short of the requirements. Since then, however, the needful improvements have been carried out, and the Authority have now been included among those to whom contributions are paid.

The Council are again to be congratulated upon the success which has attended the arrangement for the gratuitous bacteriological examinations in suspected cases of diphtheria, enteric fever, and phthisis. In some districts, however, medical practitioners have not availed themselves of this aid to accuracy of diagnosis to the extent to which it was hoped they would.

In the text of this report, the opinions of many of the District Medical Officers of Health regarding the value of the scheme are quoted, and in the following table the actual number of specimens examined since the commencement is set forth :—

BACTERIOLOGICAL EXAMINATIONS IN SUSPECTED CASES OF DIPHTHERIA, TUBERCLE, AND ENTERIC FEVER.

	DIPHTHERIA.				TUBERCLE.				ENTERIC FEVER.			
	Positive.	Negative.	Doubtful.	Total.	Positive.	Negative.	Doubtful.	Total.	Positive.	Negative.	Doubtful.	Total.
Commencement of Scheme, Oct. 20, 1898, to June 30, 1899	110	101	1	212	...	...	...	...	...	...	...	...
{ From July 1, 1899, to June 30, 1900	196	180	2	378	...	...	...	...	...	...	...	...
{ From Jan., 1900, to June 30, 1900...	...	...	...	...	9	14	...	23	5	4	...	9
From July 1, 1900, to June 30, 1901	350	350	30	730	30	70	...	100	36	36	2	74
From July 1, 1901, to June 30, 1902	190	367	14	571	25	67	...	92	26	32	3	61
From July 1, 1902, to June 30, 1903	247	421	...	668	45	77	...	122	8	41	...	49
From July 1, 1903, to June 30, 1904	183	324	...	507	41	107	...	148	3	34	4	41
From July 1, 1904, to June 30, 1905	231	494	22	747	36	100	..	136	8	24	...	32
From July 1, 1905, to June 30, 1906	271	469	15	755	56	103	...	159	13	34	4	51
* From July 1, 1906, to June 30, 1907	714	771	...	1485	82	120	...	202	18	45	..	63
Totals from commencement of Scheme to June 30, 1907	2492	3477	84	6053	324	658	..	982	117	250	13	380

* Seven special examinations of Cerebro-Spinal fluid for Meningococcus.

When the scheme was first started diphtheria was the only disease provided for, and the payment then made to the University was £50 per annum. In 1900, however, tubercle and enteric fever were included, and the payment was raised to £75. In time, other counties and districts followed the lead of Staffordshire, but not under such reasonable terms, as experience had shown the University authorities that the charge made to this County was much too low. In view of the fact that this County was the pioneer authority in the movement, the payment originally fixed was maintained until 1907, when the University, very reasonably, especially having regard to the increasing number of specimens submitted, intimated that a larger annual payment would have to be made in future. As the outcome of negotiations, a sum of £160 was agreed upon, the increased scale to come into operation on July 1st., 1907.

With reference to the administration of the Midwives Act, 1902, although it may not yet be possible to point to any very definite return for the labour spent in this direction, the returns undoubtedly indicate that the rules of the Central Midwives' Board are being more uniformly observed. Moreover, the two County Inspectors under the Act are of opinion that there is undoubted evidence of the observance of more cleanly methods on the part of the numerous uneducated and untrained midwives in the County. The full benefit of the Act, however, will not be secured until trained midwives take the place of the numerous ignorant women now in practice.

The Council have already been informed as to the progress of the work in the two divisions of the County, but the following tabular statement, which I have compiled from official returns and from information supplied by the Inspectors, will indicate the position of the County this year compared with last as regards the number of midwives on the Register and the number who have notified their intention to practice :—

1905-06. 1906-07.

Number of midwives on the Roll up to July :

Administrative County	758	714
County Boroughs	245	205
	<hr/>	<hr/>
Total	1003	1009

Number who have notified their intention to practice :

Administrative County	602	581
County Boroughs	144	113
	<hr/>	<hr/>
Total	746	694

During the period covered by this report (July 1st, 1906, to June 30th, 1907), in compliance with the rules of the Central Midwives' Board, 863 notifications have been received from certified midwives compared with 656 the previous year.

The following figures show the matters notified in each of the two years :—

	1905-06.		1906-07.	
Notification of sending for medical help ..	379	..	476	
Notification of still births	259	..	340	
„ death of mother	3	..	1	
„ death of child	15	..	46	

It must not be inferred from the great increase in the number of notifications of still births and deaths of infants this year compared with last that such increase actually took place ; the probability is that the circumstance is entirely accounted for by a stricter observance on the part of midwives of the rules of the Central Board, the result of the systematic visits of the County Inspectors. This also, no doubt, largely explains the increase in the notifications of sending for medical help, although one is hopeful that the midwives are really becoming more alive to the importance of refusing to take the sole responsibility in abnormal cases.

In the accompanying tables particulars are given as to the visits of the Inspectors during the year, and as to the position as regards equipment and efficiency of the midwives who are practising under the Act :—

VISITS OF INSPECTORS DURING TWELVE MONTHS, JULY 1ST, 1906, TO JUNE 24TH, 1907.

AREA.	No. of Midwives who have notified intention to practise.	Visits during Period.		Actual No. of interviews.
		Single.	Duplicate or more.	
NORTH ...	276	1033	323	988
SOUTH ...	305	735	121	620
TOTAL ...	581	1768	444	1608

PARTICULARS AS TO EQUIPMENT AND EFFICIENCY OF MIDWIVES VISITED.

Division.	No. of Midwives who have notified intention to practise.	Requirements.						No. reasonably clean as to		No. who can read and write.	No. who can		No. with reasonable knowledge as to	
		Washing Dresses and Aprons.	Bags Equipped (as far as ascertained).			Books, &c.		Person.	Home.		Read Thermometer.	Pass Catheter.	Infant feeding and management.	After treatment of mother.
			Fully.	Partially.	Nil.	Case Books.	Forms.							
NORTH ..	276	269	202	62	1	264	264	235	239	138	130	75	257	259
SOUTH ..	305	263	93	184	18	265	257	199	219	129	118	38	184	250

In addition to the systematic visits paid by the two Inspectors, 120 special enquiries have been made regarding irregularities, and 340 as to the circumstances attending stillbirths, upon each of which reports have been presented to me as the administrative officer of the Local Supervising Authority. In all cases in which I have deemed such a course necessary, the attention of the Local Supervising Authority has been called to irregular conduct on the part of midwives, and such action has been taken as, upon further enquiry, has seemed to be necessary, the midwives in question being given an opportunity of appearing before the Authority to offer any explanation regarding their conduct they may have to offer. In other cases I have personally written to or interviewed the midwives, cautioning them regarding their conduct in the future.

In addition to such enquiries into irregular conduct, &c., 49 cases of puerperal fever have been specially enquired into and reported upon, 13 by the late Medical Inspector, Dr. Greig, and 36 by her successor, Dr. Alexander.

In all, during the year, 52 cases of irregular conduct or malpractice were investigated by the Local Supervising Authority, resulting in 15 of the cases being formally reported to the Central Midwives' Board; the outcome of which was that in nine cases the names of the midwives were removed from the Roll and their certificates recalled, two were severely reprimanded and cautioned regarding their future conduct, while the remaining four have not yet been dealt with by the Board. In addition to these, the names of four midwives whose cases had been reported the previous year, but not then dealt with, have been removed from the Roll.

During the year, 10 midwives have died and five have notified their intention of giving up practice.

With reference to the infant mortality of the Administrative County, although the decline noted in 1902 has been maintained, I am doubtful whether one would be justified in attributing the circumstance, in any degree, to improved hygienic conditions, or whether it must be entirely attributed

to climatic conditions, which undoubtedly have conduced to a lessened incidence of infantile ailments of a preventable character.

For years this question has engaged the attention of health officers throughout the country, and again in the text of this report I have set forth the opinions of many of the Medical Officers of Health in the Administrative County on the question.

Of course, there are many contributory causes of excessive infant mortality, most of which are preventable, but there is one which far exceeds all others in potency, namely, the prevailing ignorance among mothers as to the proper feeding of infants. Some authorities in the County have creditably done what lies in their power to break through this ignorance by appointing women visiting inspectors and providing courses of lectures on health subjects, with the assistance in some cases of the County Education Committee, but, commendable though such efforts are, I fear they are comparatively futile so far as the object aimed at is concerned. Experience, I fear, compels one to come to the conclusion that it is hopeless to attempt to educate the present race of mothers. At the same time, some good in this direction may ultimately result from the administration of the Midwives Act, for a midwife has great influence over mothers, and sound advice given during the early weeks of the child's life must, occasionally at any rate, bear fruit. No real headway will be made, however, until the rising generation of both sexes are systematically taught elementary health principles at school. The first step in this direction is to educate the teachers in order that they may be able to give the necessary instruction, and the Education Committee of this County are to be congratulated on having gone thus far.

Under that Committee, Miss Curwen has now been engaged for two years in conducting classes in Practical Hygiene for School Teachers, and the following account of her work which she has kindly prepared will, I am sure, be read with much interest :—

“ The establishment in this County of Classes in Practical Hygiene for Teachers began with a short course, in the spring of 1905, of fourteen lectures, as an experiment. Two centres were chosen, one in the north of the County, at Stoke-on-Trent, and the other in the south, at Bilston. Owing to the great difficulty at Stoke in finding a suitable room free, at the desired time, we were obliged to make use of the Mining School, whose conditions violated most of the laws of hygiene.

“ Twenty teachers, working in pairs, were admitted at each centre. The lectures lasted two hours, and consisted of lecturing combined with practical work taken in conjunction with the lecturing, and bearing on its subject. In both centres the course was a complete success, and a longer one was desired.

“ In the following autumn the Education Committee decided to allow a year's course, but owing to the discomfort of the room at Stoke and the need for a centre nearer Stafford, it was decided to abandon the class for the north of the County and to begin over again at Stafford, with a full course of a year, giving fourteen lectures before Christmas, 1905, to Stafford, which would thus have what had already been given to the Bilston class. It was also decided that after Christmas, in the spring of 1906, the course would be taken up again at Bilston, in order to comply with the desire of the students there for an extension, and would be carried on synchronously with Stafford. All this was accordingly done.

“ It had now become evident to the students that both from the educational and the utilitarian point of view, there was much to be learnt from the subject, and they, with myself, felt that the course suffered from compression. Many teachers have very little time for study, and if they desire ultimately to take the examination in Practical Hygiene for School Teachers at the Royal Sanitary Institute, the course, if it is to help them to pass the whole examination in one year, would lose a good deal of its educational value. The Education Committee, with its wide educational outlook, being strongly desirous of keeping the educational character of the course unimpaired, agreed to change it into a two-year one. This enables students to take the examination of the Royal Sanitary

Institute in two portions, one at the end of the first year and the other at the end of the second, or they may wait and take both portions together. The Education Committee also felt that it would be desirable to allow new students to enter at the commencement of the second half of the course, and for that purpose a repetition of a certain amount of physiology has been placed at the beginning of the second year, though not shown in the syllabus. This places new students in the position of understanding what has gone before, and they can complete their studies by going on to the First Year Course in their own second year, and taking the examination either altogether on the completion of the full two years, or in two portions, as the Royal Sanitary Institute permits them to take the second half of the examination first if so desired.

“ In the autumn of 1906 three centres were adopted for the classes on the new syllabus. The Stafford class took the second-year course, having already had a year of the compressed course. A few new students were admitted, but the majority were students of the previous year. Classes for the first year were also established at Brierley Hill in the south and Longton in the north. At the latter place the attendances have been remarkably good, and a spirit of earnestness and enthusiasm marked the class from the first. I cannot speak too highly of the attention and the seriousness of purpose of all the members. I am certain that the students of the course there and in Stafford are doing their utmost to carry out in their work the knowledge they have acquired, and I believe that the influence will be wide and far-reaching, not confined only to the schools, but spreading in all directions. The influence of the teacher, especially in rural districts, can and does do a good deal, and his or her advice is often sought by the parents of the scholars. It is probable that all the students at Longton and many of those at Brierley Hill will continue for the second year, and that several will take the examination of the Royal Sanitary Institute at the end of that period.

“ From students at all centres one gains an insight into the power of a knowledge of Hygiene for good. One teacher speaks of the interest shown by the boys in his school in the subject, and adds, ‘ I notice a great change now-a-days.

Formerly, had one spoken of health questions it would have meant a certain amount of amusement and foolish giggling. Now the lesson is listened to with the same seriousness as is the Bible lesson.' Another teacher, also a man, writes that he hopes he may be able to continue the course, as it has already, he feels, done much good, not only in school life, but also in his own life and in that of others. Another, a lady teacher, said : ' I hope I may be able to continue, for already it has been a help to me in more ways than I can say, at school and home.' This teacher has put her knowledge to the practical proof of investigating the diet of the children of a poor neighbourhood, where a fried fish shop has been recently established, and has worked out the caloric and economical value of the meals obtainable.

" I have great pleasure in sending you some examples of papers done by the school children at St. Leonard's School, Stafford. Mr. Henry has not been long established in this school, and feels that he cannot yet do all he would wish as regards the teaching of Hygiene ; he seems, however, to have made an excellent beginning. These papers are compositions written as a result of practical teaching. He tells me that the children are greatly interested in the subject, and this fact is, I think, shown by the manner in which the compositions have been done.

" In conclusion, I would say that I find everywhere now a keen interest in Hygiene questions all over the County. Children are bringing back to home, from school, knowledge and habits which are making their way—not all at once, of course, but though what is said is often disregarded at the time, the repetition from many sides gradually makes its effect felt upon the parents. To this end, ' Popular Lectures ' on Health do much good. The parents learn at these lectures, and frequently observe with interest : ' Why, that's just what our Sissie is being taught at school ! ' Next time ' Sissie ' talks they pay her more attention and the lesson is brought home. Strongly as I hold that the way to alter unhygienic habits and to lessen the terrible infantile mortality lies in the education of the rising generation, I nevertheless feel that popular lectures help on the work and greatly serve to emphasise the value of what is being taught to the children.

“Requests for the establishment of centres are being received by the Education Committee, and it is probable that a First Year Course will be given at Rugeley for one centre, and the Second Year Courses at Brierley Hill and Longton. Requests have also been received for a course at Leek, but this will probably have to wait for the termination of the course at Longton.”

With reference to the above most gratifying account of Miss Curwen's excellent work, I hope to be able to report next year that a number of her pupils have successfully passed the examination in Hygiene for School Teachers of the Royal Sanitary Institute.

With reference to this year's district reports, I am again glad to be able to record that continued efforts are being made by many of the urban authorities to abolish privies and private well supplies in favour of water-carriage systems and public water supplies.

As regards the former question, it is to be hoped that the account of this movement recorded in this report will stimulate those authorities, of urban districts more especially, who are not displaying much energy in this direction, to adopt this excellent policy. As regards the latter question, the remarks which follow under the heading of Water-supply afford ample evidence of the risks attending the continuance of private well supplies, especially in populous districts, and point to the extreme importance of substituting for these, supplies from a public source when such are available, or, failing that, of making every effort to protect wells from surface contamination.

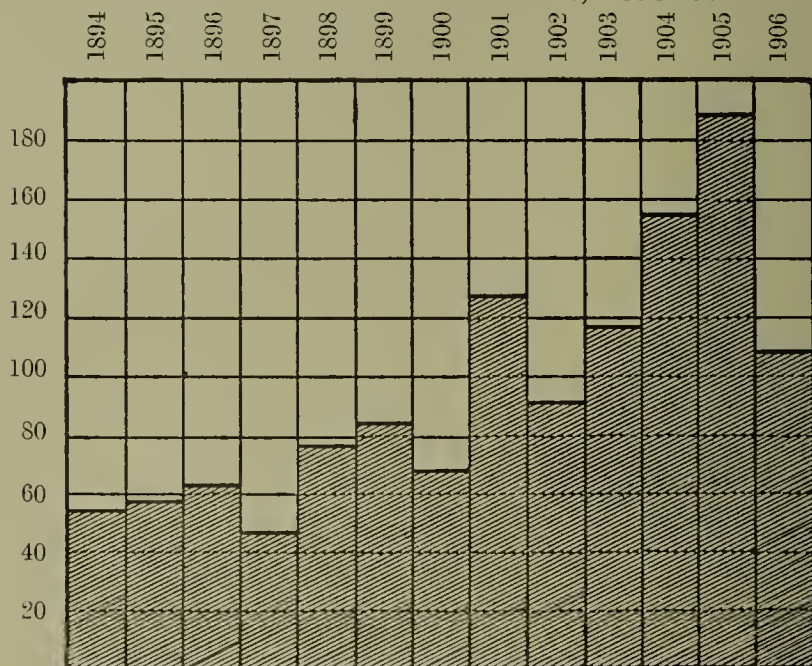
With reference to the consultation work of the health department, which does not necessarily come before the Sanitary Committee of the County Council, I have been consulted on 110 occasions (compared with 190 last year) by Medical Officers of Health and other officers of Local Authorities and Committees of the County Council on special matters of importance which have arisen.

This consultation work occupies a considerable amount of time, and often involves visits to different districts, either

to make enquiries incidental to the points submitted, or to attend meetings of Local Authorities or committees. It embraces also a careful study of plans and specifications of works and buildings, in order to report thereon.

The following diagram shows at a glance the number of such consultations each year since 1894 :—

DIAGRAM SHOWING CONSULTATIONS WITH OFFICERS OF
SANITARY AND OTHER AUTHORITIES, 1894-1906.



The falling-off in the number of consultations this year compared with the two previous years may partly be attributed to coincidence, but it is mainly attributable to the fact that important schemes of sewage disposal, which previously were under consideration, have been or are being carried through. Other schemes, however, are now ripe for consideration, and in all probability it will be found that next year's column of the diagram will more nearly approach that of 1905.

Besides the Annual Reports of Medical Officers of Health, I have received 62 special reports during the year, having reference chiefly to outbreaks of infectious disease.

I am pleased to say that all the Annual Reports of District Medical Officers of Health are now printed.

Summary of Reports with Comments.

AREA AND POPULATION.

Next year I shall have a considerable alteration to record in the area of the Administrative County owing to Smethwick, which has an area of 1,929 acres and a population of 65,000, being constituted a County Borough. As, however, the Order did not come into operation until April, 1907, the statistics for the year 1906 are unaffected by it.

As regards the artificial disturbance of the populations of the constituent districts, a slight alteration has to be recorded owing to the transference, on September 30th, 1906, of the Parish of Bagnall, with a population of 533, from the Rural District of Stoke-on-Trent to the Leek Rural District. As the transfer became operative so late in the year, I propose to disregard it for the purpose of this year's summary.

In the following table the actual census figures for 1901, and the estimated population of the Administrative County up to the middle of 1906, are set forth, the urban being distinguished from the rural districts :—

	Census, 1901.	Estimated to middle of 1906.	Increase.
Urban	682,503	743,636	61,133
Rural	193,446	199,530	6,084
Total.....	875,949	943,166	67,217

BIRTHS.

The births registered in the Administrative County numbered 29,161, the number in the urban districts being 23,725, and in the rural districts 5,436.

The mean birth-rates in the whole Administrative County, and in the urban and rural districts respectively, for three quinquennial periods and for 1904, 1905, and 1906 individually, are shown in the following table, in which corresponding rates in England and Wales, and in the large towns in England, taken from the Registrar-General's returns, are included :—

		BIRTH-RATE PER 1000 OF POPULATION.					
DISTRICTS.		5 Years 1889-1893.	5 Years 1894-1898.	5 Years 1899-1903.	1904.	1905.	1906.
Staffordshire	{ Combined Urban & Rural	34·4	35·4	33·1	32·5	31·0	30·9
	{ Urban	36·0	30·5	34·2	33·7	32·0	31·9
	{ Rural	30·8	34·0	30·2	28·4	27·1	27·2
England and Wales.....		30·8	29·7	28·7	27·9	27·2	27·0
Large Towns in England		31·5	30·7	29·7	29·1	28·2	27·9

In most of the reports under review attention is called to a steady falling-off in the birth-rates, and in many instances the rates for this year are referred to as being the lowest on record. This is so as regards Brierley Hill, Fenton, Willenhall Urban Districts, and Blore Heath and Lichfield Rural Districts.

In Burslem, where the rate was 33·8, the Medical Officer of Health points out that it is 3·6 below the mean for the previous ten years.

The Medical Officer of Health of Fenton writes :—" The birth-rate for the whole district is again the lowest recorded. Although still considerably higher than that for both Urban England and Wales, and for the country as a whole, it has yet been declining during the latter half of the past decade. It would seem as though the causes of declining birth-rate which began to be operative as regards the whole country some 30 years ago, have begun to become operative here."

The Medical Officer of Health of Leek Urban District, in referring to a low rate of 23·0, points out that it is 4·0 below the mean for the previous ten years.

The Medical Officer of Health of Quarry Bank points out that while the rate is still high, viz., 31·6, it is slowly diminishing.

In Sedgley, although a rate of 34·0 is recorded, it is referred to as being 3·6 below the mean rate for the previous ten years.

In Short Heath, where a rate of 35·1 is recorded, it is said to be the lowest since 1889, with one exception, viz., 1905.

In the Borough of Stafford, a rate of 26·4 is referred to as being, with one exception (viz., 1903, when it was 26·1), the lowest recorded rate.

The Medical Officer of Health of Walsall Rural District writes :—" The birth-rate this year (28·0) is the lowest, with one solitary exception, that has been recorded for this district. For several years past the rate has been lower than was formerly the case, and points to the fact that the number of births are gradually becoming fewer in districts such as this, where the population is mainly composed of the artisan class, in keeping with those districts where the majority of the people are in better circumstances. The factors tending to produce a decrease in the birth-rate are of too complex a nature to enter into in a report of this kind, but, to my mind, the entire cause is to be found in the advance of civilization, and its accompanying results."

Smallthorne, where the rate was 42·7, appears to be the only exception as regards declining birth-rate.

DEATHS.

The number of deaths registered among persons belonging to the Administrative County amounted to 14,352, the number in the urban districts being 11,758, and in the rural districts 2,594.

In the following table comparative figures for the past 18 years are given, together with the corresponding figures for the country as a whole, and for town and country districts throughout England :—

DEATH-RATE PER 1000 OF POPULATION.

STAFFORDSHIRE.				ENGLAND.		
YEAR.	*General.	*Urban.	Rural.	General.	Large Towns.	Country Districts.†
1889 ...	18·0	18·9	15·4	17·9	19·2	16·5
1890 ...	19·8	20·0	16·3	19·5	21·6	17·5
1891 ...	19·9	20·7	18·1	20·2	22·4	18·5
1892 ...	18·8	19·2	17·9	19·0	20·6	18·1
1893 ...	18·6	19·5	16·3	19·2	21·5	17·4
1894 ...	16·2	16·5	15·4	16·6	18·0	15·6
1895 ...	18·5	19·1	16·9	18·7	20·5	17·0
1896 ...	17·2	18·0	15·2	17·1	19·2	15·3
1897 ...	17·8	18·6	15·7	17·4	19·1	15·8
1898 ‡...	17·7	18·4	15·5	17·6	18·3	16·0
1899 ‡...	17·2	17·8	15·4	18·3	20·2	16·3
1900 ‡...	18·7	19·3	16·8	18·3	19·5	16·9
1901 ...	17·0	17·6	15·4	16·9	17·7	15·3
1902 ..	15·8	16·3	14·4	16·3	17·4	15·3
1903 ...	15·2	15·8	13·5	15·4	16·3	14·8
1904 ...	16·4	17·2	14·4	16·2	17·2	15·3
1905 ...	15·4	15·9	13·5	15·2	15·7	14·9
1906 ..	15·2	15·8	13·0	15·4	15·9	15·1

* Excluding Brownhills in the case of the year 1897.

† Certain proportion of Urban residents included.

‡ The figures for Burton-on-Trent are taken into account for the three years 1898-1900 only.

The death-rates in urban and rural districts, together with the figures upon which they are based, are shown in the tables at the end of this report. In the following table the figures are given for those urban districts in which the rates this year reach 20·0 per 1,000, together with figures and remarks bearing on the influence which causes, preventable and more or less non-preventable, have had in causing such high rates. The districts are placed in order in accordance with the death-rates, the highest being placed first. The fact must not be overlooked, however, that there are other districts besides those appearing in the table in which the rates were by no means satisfactory, as a glance at the detail tables at the end of this report will show.

DISTRICT.	Death-rate per 1000 of Population.	Population estimated to middle of 1906.	Number of persons to the Acre.	Zymotic death-rate per 1000 of population.	Occupation, &c.	Increase over average of entire districts from the undermentioned diseases, affecting appreciably the general rate.				Position as regards mean death-rate for previous 10 years.
						Measles.	Whooping Cough.	Diarrhea.	Diseases of Respiratory Organs.	
Bilston ..	23·3	24,400	13·0	3·03	Working class.	Slight.	Slight.	..	..	20·4
Longton ..	22·9	36,797	19·3	4·72	do	..	..	Very Considerable.	Considerable.	23·2
Darlaston ..	22·6	15,730	19·1	2·47	do.	..	..	..	Considerable.	21·9

Considering the fact that the general urban death-rate of the County is a low one, namely 15·8, the above rates must be looked upon as being highly unsatisfactory, more especially having regard to the figures in the last column of the table, which show that the three districts in question are normally high death-rate districts. It behoves the respective Local Authorities, therefore, to make every effort in their power to effect a reduction in the rates by strictly enforcing the provisions of the Public Health Acts and local Bye-laws. From my personal knowledge of the three districts, I am satisfied that there is room for greater activity in that direction, and while fully realising the difficulties which have to be overcome, many of which are the direct outcome of lax sanitary administration in the past, it does not appear that very determined efforts have yet been made to bring about any material improvement in the conditions which undoubtedly are largely responsible for the high death-rates. The authorities in question ought to be aware of what these conditions are, as time after time their Medical Officers have called attention to them, but a descriptive report is far inferior from the point of view of enlightenment than an actual inspection, and I would strongly recommend the authorities to make personal inspections of their districts under the guidance of their Medical Officers in order to see for themselves typical examples of the conditions which prevail.

Among the districts whose Medical Officers comment upon exceptionally low death-rates compared with previous rates may be mentioned Fenton (16·8), Heath Town (12·4), Short Heath (13·1), Smallthorne (16·1), Stafford (13·9), Stoke-on-Trent (13·3), and Willenhall (18·6) Urban Districts, and Lichfield Rural District (13·2).

INFANT MORTALITY.

It has been my practice in previous years to compile a table showing the districts in which the infant death-rates have been exceptionally high, and I have usually adopted a rate of 200 and upwards as the qualifying figure for this black-list, but owing to the rather low rates, I have this year fixed the figure at 180. It must be remembered, however, that this figure is a very high one, and notwithstanding that fact, there are eight districts in the county where it is exceeded this year, as the following figures show :—

Deaths among children under one year in certain districts per 1,000 registered births.									
	Bilston.	Brierley Hill.	Burslem.	Darlaston.	Longton.	Perry Barr.	Tunstall.	Wednesfield.	
5 years 1889-93...	203	178	193	214	225	150	213	175	
„ 1894-98...	207	170	204	212	247	146	224	134	
„ 1899-1903	188	146	198	204	227	168	200	153	
1904...	220	185	195	196	194	174	245	154	
1905...	184	159	202	219	196	69	200	144	
1906...	181	186	185	187	234	227	184	187	

With the exception of Perry Barr and Wednesfield, it will be noticed that all the districts in this year's table may be said to be high infant death-rate districts. In the case of Perry Barr, much importance need not be attached to this year's high rate, considering the comparatively low mean rates for previous years, and, having regard to the small population, the occurrence may fairly be attributed to accidental or exceptional circumstances. This explanation, however, does not apply to the other districts in the table, and a great responsibility rests upon the respective authorities to make every possible effort in the direction of correcting the defective sanitary conditions in such districts which conduce to infant deaths, and in adopting such other preventive measures as may be specially applicable, under the advice of the respective Medical Officers of Health.

Dealing with the districts in the above table first, the special comments of the Medical Officers of Health may be summarised as follows :—

The Medical Officer of Health of Bilston comments very fully upon the causes of infant mortality, and with reference to the need for the earlier registration of births he writes :—
“ One thing that follows from this is the necessity for the much earlier registration of births. In England births are registered within six weeks, in Scotland within three weeks, and in France within three days. It is evident that when one-third of the total infants' deaths occur within the first month effective measures of prevention cannot be adopted under the present system, in which the limit is far too long.”

The Medical Officer of Health of Brierley Hill points out that the mean rate for the past ten years was 157, and that the rate of 186 this year is probably accidental.

As regards Burslem, the Medical Officer of Health merely points out that the rate of 185 compares favourably with a rate of 202 the previous year, and with a mean rate of 203 for the past ten years, but from the report of the health visitor, Miss E. S. Cotton, which is embodied in that of the Medical Officer of Health, I quote the following :—“ In addition to the 3,362 visits paid to cases of infectious disease and neglected children, 581 visits have been paid to houses where births have occurred. Out of the 581 born, 384 were breast fed and 170 hand fed. One hundred and forty-three of the children suffered from convulsions, 89 of which were hand fed or 10·9 per cent., while only 7·3 per cent. of the breast-fed were affected, and I find that in many cases the mothers of these, either had been or were on my visit working in manufactories, in fact, I seldom find that where the mother stays at home and feeds the child from the breast convulsions occur ; and in my opinion this points definitely to the fact that the working of the mother away from home is responsible to a great extent for the high infantile mortality.

“ Sixty-six children died before being registered, and in my opinion the period allowed for registration, namely, six weeks after birth, is far too long, for these children, in the

majority of cases, are dead and buried before we receive any intimation, therefore no inquiries can be made until in some cases the child has been buried some weeks.”

Further, she adds :—“ Many and varied are the causes responsible for the deaths of young children, but the following seem to be some of the principal causes :—On visiting a house I invariably find a young baby being fed on boiled bread, cornflour, or biscuits, etc., instead of the breast or cow’s milk, diluted as the case requires, and while the mothers, I believe, have no idea of being unkind to their children, they seem to lack the knowledge necessary for their proper feeding, even in the case of older children, say six or eight months, the same thing prevails to a large extent, and it is a common practice to give these children raw vegetables, cheese, pickles, meat, and other unsuitable food.

“ Then, again, many children suffer from chest affections brought on by the thoughtlessness of their parents, who often keep their children in a warm kitchen and then expose them to the colder atmosphere of the street without extra clothing, with the result that bronchitis, pneumonia, and other maladies are set up, which so often result in death.”

The Medical Officer of Health of Darlaston writes :—“ A child within the first year of its existence manifests great proneness to become affected by adverse influences, and its power of resistance is so low that, given surroundings that embody dampness, defective ventilation, and overcrowding, we have, if injudicious feeding be also taken into account, ample explanation for the existence of these diseases.”

The Medical Officer of Health of Longton, which is still in the unenviable position of having the highest infant death-rate in the county, embodies in his report a special report on infantile diarrhoea which, it appears, he prepared for the Local Government Board, and which deals with various causes, such as ignorance of mothers regarding the feeding of infants, insanitary conditions, &c. In his report is also embodied one from Miss Ada Hanson, a recently-appointed inspector or health visitor, from which I extract the following :—“ I have visited 945 houses where

births have occurred, and in the course of my enquiries I found that 569 of the infants were wholly breast-fed, 167 bottle fed, and 191 partially breast and hand, breast and bottle, or hand fed, with the addition of patent foods, bread, biscuits, cornflower, sago, etc. The remaining 18 are children who had not taken food, or had left the town immediately after registration.

“The mothers of 212 children were otherwise employed than in the care of the home. The greater number of these mothers were able to feed their children by natural means, but in consequence of their absence the children are put out to nurse and artificial feeding resorted to, and are carried out in the early morning to the houses where they are nursed during the day.

“Coming a stranger into the town, the impressions created when visiting the houses were the squalid and dirty conditions under which the poorer people live, the improper and careless feeding of the children, and in visiting the houses where diarrhoea deaths had occurred, the storage of food in improper vessels and places in close proximity to foul and offensive cesspools, and offensive open ashpits, the decomposing contents of which caused extensive pollution of the atmosphere. In few houses visited did I find any proper provision for the keeping of food, in many instances milk being kept in scullery or wash-house uncovered, in cupboards close to fire-place, where a big fire was kept up, and with other food on kitchen tables from which swarms of flies arose when approached. Bread is often kept on the floor.

“Ventilation seems to be greatly objected to, and in addition to closed windows, I find the chimney in many bedrooms is made up, the excuse being that it is draughty.

“These facts, in my opinion, help to account for the high infantile mortality, and it is only by impressing upon mothers and nurses the importance of thorough cleanliness, and careful feeding of the children, that we can hope for better results. In all cases of sickness I recommend that medical advice be obtained.

“ Advice personally has been given, and leaflets giving hints on the feeding and care of children, diarrhœa, measles, infectious diseases, and consumption, have been distributed.

“ I have paid 563 return visits where I thought the children were being improperly fed or neglected in any way, in several cases paying a weekly visit with satisfactory results. I am pleased to say that the hygienic boat-shaped feeding bottle is being more widely used and appreciated.”

It is obvious from the matter in this lady's report, as also from that of the Burslem health visitor, previously referred to, that in this direction much good work may be done. The question is essentially a woman's one, and such help must be of the utmost value to the Medical Officer of Health, who cannot expect to obtain so intimate a knowledge regarding the home habits of the people through the male inspector; moreover, the latter, in his systematic visits, cannot exercise that educational influence which a tactful, specially-trained woman can, by means of homely talks with mothers regarding domestic health matters.

The Medical Officer of Health of Perry Barr writes that while the infant death-rate in that district was 227, it has only once been exceeded during the past ten years, and that comparatively few of the deaths occurred from diarrhœa or preventable diseases.

The Medical Officer of Health of Tunstall writes:—
“ fully 40 per cent. of the deaths of infants have been attributed to prematurity, atrophy, debility, marasmus, &c., conditions, having in many cases an antenatal origin. These children are simply born in such poor physical condition, that they are unfit to live, and find a few hours or days of life too much for them. Facts such as these point to some serious social defects, such as intemperance, marriage of the unfit, and factory employment of married women.

“ Diseases of the lungs, such as bronchitis and pneumonia, are responsible for the next highest in the number of victims.

“ Better housing conditions in my opinion might obviate the mortality from these causes. Many of the children

when seized with these diseases, instead of being carefully nursed in a comfortably warmed bedroom, receive but half-hearted attention in the living room of the family.

“Diarrhœal diseases have claimed an equal number of victims during the year. For the reduction of mortality from diarrhœa our efforts must be directed to measures which will bring about greater cleanliness in and around the houses. We must see that the yards and back entries are properly paved, and push on with the total abolition of privy middens, the provision of water-closets and frequently-emptied dust bins. The milk supply should also be placed on a better system. Many of the milk shops fall very far below an ideal standard of purity.”

The Medical Officer of Health of Wednesfield refers to the infant death-rate as being the most unsatisfactory feature of the death returns, and suggests that education is the remedy which is likely to be most efficient.

As regards the other districts, whose rates this year are not high enough to bring them into the above table, the following information is extracted from those reports which give prominence to this subject :—

The Medical Officer of Biddulph, in commenting upon an infant mortality rate of 166, which is the highest during the previous ten years, attributes a considerable share in the cause of the mortality to improper feeding, improper clothing, and exposure, and he considers education is the chief remedy.

The Medical Officer of Health of Coseley writes :—“ I pointed out last year that the infantile mortality was the lowest on record. It is therefore highly satisfactory to find that the rate is precisely the same for 1906. Of the 97 deaths which occurred under one year of age nearly 50 per cent. occurred in the first month of life, and it is evidently desirable that information of births should be required to be given earlier than six weeks, as at present. I understand that a small fee is being offered in some districts to encourage early notification, and the homes are then visited by women inspectors. Analysing the 45 deaths which occurred under one month, I find that 21 died from premature birth, congenital

defect, or injury at birth, but of the rest it would appear that due care and proper management in feeding and clothing would have obviated 10 deaths at least, and these are the cases especially likely to benefit.

“Health lectures to women were given by the County Council Lecturer, and I understand were well attended.

“I beg to recommend that the practice of giving printed instructions on the feeding and management of infants to the parents when the birth is registered be continued, as the instructions have been much appreciated by certain of the parents. I consider that the teaching of the elementary rules of health to the older scholars in the day schools, including infant feeding, should be carried out in every school. The County Education Committee have started training classes for school teachers in these subjects.”

The Medical Officer of Health of Fenton devotes considerable space to this subject, and the following extract from his report regarding the social aspect of the question is of painful interest :—“This table shows that the infantile mortality is much greater in the East Ward than in any of the others, and that it is accompanied by a correspondingly high illegitimate birth-rate and still birth-rate.

“Whereas the infantile mortality rate per 1,000 born among legitimate children was 151, taking the district as a whole, the rate among children born out of wedlock per 1,000 illegitimate births amounted to the appalling figure of 333 !

“Hence it would seem that the comparatively high infantile mortality of the East Ward is due to the social rather than the physical environment, and this surmise is confirmed by the fact that it is not accompanied by any corresponding increase in the general death-rate, or in the average density of population per acre.”

With reference to the effect of improper feeding upon the infant death-rate, the Medical Officer of Health of Handsworth writes :—“Of the 181 infants, 49 having died within 14 days after birth, in cases where death was due to prematurity or some congenital defect, enquiry was not made as to feeding. Of the remaining 132, 27 were fed at the breast, 100 were

brought up by bottle, and five were both breast-fed and hand-fed. Of the 54 children who died of diarrhœal diseases, only four were breast-fed.

“On the important subject of the care and feeding of infants, a leaflet, drawn up in simple language, is given by the Registrar of the district to every person who registers the birth of a child. Copies may be obtained gratis at the office of the Sanitary Inspector at the Council House. The first print of the leaflet having been nearly used up, it will be re-written and re-printed during 1907. A serious disadvantage in connection with the registration of births is the fact that many of the births are not registered until the child is several weeks old. Some revision of the law is urgently necessary, and the registration of births should be governed by the same rule as the registration of deaths. If this were so there would be very much greater possibilities of taking proper means to check the infantile mortality. The continually decreasing birth-rate makes it a national necessity that measures should be taken to check the great infantile mortality.”

The Medical Officer of Health of the Borough of Newcastle writes under this heading :—“I am pleased to say there is a marked improvement with regard to the deaths of infants and children under the age of five years. With improved sanitary conditions, the demolition of the old property, better housing conditions, and a wider knowledge of the proper methods for infant feeding, I am in hopes of a still further improvement.”

The Medical Officer of Health of Quarry Bank calls attention to an increased infant mortality rate, while the general death-rate and the zymotic and phthisis death-rates are lower. For some time lessons in elementary hygiene have been given in the schools, and the following interesting letters from teachers are embodied in his report :—

From Mr. Lewis, Headmaster of High Street Schools :—
“ ‘After conference with the Headmistress of Girls’ Department on the matter of teaching ‘Infant Hygiene,’ I am quite

convinced that it is a most important, suitable, and necessary subject for the senior girls.

“ ‘ The children are interested in the subject, and that interest is unabated.

“ ‘ There is no doubt whatever as to the receptivity of the children on all the essential points, and especially with the assistance and elucidation of the teachers, which always accompany the reading.

“ ‘ You will be glad to know that the books kindly furnished (by the Council) have been of much service, and that these have been supplemented by a reader, ‘ The Laws of Health.’

“ ‘ In the Boys’ Department (senior scholars) we have had in use a ‘ Health Reader,’ with a view to add such suitable information and instruction needed in the later years of school life, to correspond with that of the girls.’ ”

From Mr. Hunt, Headmaster of Mount Pleasant Schools :—
 “ ‘ We have taken a much more extended course of lessons this year than during any previous year, as I find the children appreciate the value of having a practical knowledge of the laws of health. Thus we have treated the subject under the following heads :—

“ ‘ (a) Human Physiology in Relation to Hygiene.

“ ‘ (b) Foods and Feeding.

“ ‘ (c) Care of Infants.

“ ‘ (d) Personal Hygiene.

“ ‘ Allow me to take this opportunity of thanking you for the continued interest you take in the education of the child in ‘ Infant Hygiene.’

“ The subject has been before Parliament recently, and sooner or later must become part of the school curriculum, legally enforced.”

The Medical Officer of Health of Sedgley writes :—“ I hope the Education Committee of our County Council will speedily introduce the teaching of senior pupils in everyday

matters affecting the health, including for senior girls instructions as to infant feeding. The cards issued by this Council, and kindly distributed by the Registrar, as to 'How to Feed your Baby,' have been useful, and are appreciated by the parents.

"I understand that the County Education Committee have started training classes for school teachers in these subjects, and that in many of the Training Colleges they form part of the ordinary curriculum. The lessening of our infant mortality is of national importance, especially in relation to the continuously decreasing birth-rate."

The Medical Officers of Health of the following districts call attention to exceptionally low rates of infant mortality, namely :—Cannock, Heath Town, Short Heath, Smallthorne, Smethwick, and Stoke-on-Trent Urban Districts, and Cannock, Eccleshall, and Walsall Rural Districts.

As in previous years, I have prepared a table showing the infant mortality rates in different groups of artisan towns in the Administrative County, classified according to the proportion of married women workers in each, as far as such can be ascertained. The grouping is based upon the number of married and widowed females in relation to the female population between the ages of 18 and 50 years, as obtained from the 1901 census, the Registrar-General having been good enough to supply me specially with the data.

Had it been possible to work out the rates in each case on the married female population only, the percentages would, of course, have been higher, but I had no data to allow of this being done. Again, I am obliged to assume, in the absence of corresponding figures from previous census returns, that the number of married and widowed outworkers to the female population within the specified age limit was the same throughout the 22 years covered by the infant mortality figures as in the last census year, an assumption which, I think, is justified by the fact that no change has taken place in the special trades carried on in the various towns during the whole period.

Class according to percentage of Married and Widowed Workers to Female Population between 18 and 50 years.	No. of Towns.	Total Population, 1901 Census.	Deaths of Infants under 1 year per 1,000 registered births.		
			1881-1890	1891-1900	1901-1906
I.—12% and over	5	132,299	195	212	192
II.—Under 12% and over 6%	13	263,868	165	175	155
III.—Under 6% ...	8	131,508	156	168	146

It will be seen from these figures that, while the mean rate for the past six years has been lower in each group than in the previous two decennial periods, the same relative proportion has been maintained in the three groups.

Among the general tables of statistics will be found, for the first time this year, a table classifying the deaths among infants under twelve months, according to causes and ages, the sub-divisions as regards age being weekly in the case of deaths occurring during the first month of life and monthly afterwards. This table was first introduced by the Local Government Board last year, but I was unable then to make use of it because the details were not supplied in the case of many of the districts.

ZYMOTIC DEATH-RATE.

The death-rate from zymotic diseases, including under this heading, according to the Registrar-General's classification, the seven principal ones—viz., small-pox, measles, scarlatina, diphtheria, fevers, whooping cough, and diarrhœa—is slightly higher this year than last.

In the following table the comparative figures are given for the past eighteen years, together with similar figures for England and Wales, and for the larger towns in England :—

Zymotic Mortality per 1000 of Population.

	Districts in Administrative County.			England and Wales.	Large towns in England.
	Urban.	Rural.	Urban & Rural combined.		
1889	2·36	1·17	1·99	2·40	2·72
1890	2·06	1·15	1·77	2·05	2·77
1891	2·00	1·36	1·82	1·83	2·41
1892	2·03	1·10	1·77	1·90	2·63
1893	2·41	1·58	2·17	2·47	3·17
1894	1·68	0·97	1·47	1·76	2·43
1895	2·39	1·15	2·04	2·14	2·82
1896	2·71	1·55	2·39	2·18	2·90
1897	2·91	1·57	2·54	2·15	2·87
1898	3·41	1·68	2·97	2·22	2·85
1899	2·54	1·27	2·22	2·21	2·81
1900	3·04	1·89	2·75	2·00	2·50
1901	2·50	1·39	2·21	2·05	2·68
1902	1·63	0·93	1·44	1·64	2·12
1903	1·63	0·86	1·43	1·46	1·89
1904	2·41	1·15	2·14	1·94	2·49
1905	2·00	0·91	1·77	1·52	1·88
1906	2·15	0·81	1·87	1·73	2·24

SPECIAL ZYMOTIC DEATH-RATE.

Small-pox.—We now appear to have entered upon a period of quiescence as regards this disease, as no cases have been notified during the year. Judging from former experience, we may hope to be practically free from the disease for a few years, but having regard to the inadequate protection afforded by vaccination—owing to re-vaccination not being compulsory, and the imperfect way in which primary vaccination is too often performed—it is inevitable that outbreaks

of the disease will occur sooner or later, therefore the costly machinery for dealing with such outbreaks must be maintained.

Measles.—In the Administrative County 155 deaths occurred from measles, as compared with 511 in 1905, equal to a rate per 1,000 of the population of 0·16, as against 0·54. Of these deaths, 145 occurred in the urban districts, or 0·19 per 1,000, and 10 in the rural districts, producing a rate of 0·05 per thousand.

In the following table corresponding figures are given for three quinquennial periods, and for the past three years :—

MEASLES.		Mean for 5 years. 1889-1893.	Mean for 5 years. 1894-1898.	Mean for 5 years 1899-1903.	1904.	1905.	1906.
Urban {	Number of Deaths...	281	356	260	316	459	145
	Rate per 1000.....	0·51	0·59	0·38	0·44	0·62	0·19
Rural {	Number of Deaths...	68	69	40	41	52	10
	Rate per 1000.....	0·29	0·30	0·17	0·20	0·26	0·05

In Bilston, 18 deaths occurred from this disease, 15 of them being children under five years. The Medical Officer of Health is of opinion that schools greatly assist in spreading the disease.

Under this heading, the Medical Officer of Health of Coseley writes :—“ On my suggestion, the Education Committee have adopted a system of notification to me, by post-card from the teachers, of cases of illness amongst the school children. The system was not started at the time of the above outbreaks. I have received over 40 post-cards up to the present, and by their means have detected several cases of unnotified infectious disease. In the rules of the Education Committee it is laid down that older scholars coming from houses infected with measles, and who have had measles themselves previously, need not be excluded from school. I hope, therefore, that the Education Committee will require a measles record to be kept in each school, so that the above regulation may be properly carried out, and by exclusion of

those susceptible the total closure of schools may often be avoided."

Willenhall seems to have been an exception to the rule as regards the lessened prevalence of measles, as the Medical Officer of Health of that district states that, with one exception, namely, 1897, the cases far exceeded those of any year since his appointment in 1888. With reference to school attendance as influencing the spread of measles, he writes:—"The Council knows my belief that the close aggregation of young children at school is a frequent cause of epidemic disease and especially of measles, and I have an opinion that education before attaining the age of five is of little value. Measles is contagious before the rash appears, and I cannot think of any way, better than that usually adopted, to get earlier information than we now get of suspected cases, except the appointment of a School Medical Officer; and even then, to detect suspicious cases of measles, he must be at the school early in the day, and often, if good practical results are to be obtained. . . .

"Until this year, I have never permitted myself to entertain school closure, except on the grounds of possible or probable benefit to health; and even this year, not previous to December 15th, when possibly the nearness of the holidays may have inclined me in a slight degree to deviate from my usual custom. Since, however, the Education Committee of the County Council, in a circular issued September, 1905, called the attention of Managers to the *financial importance* of getting their schools closed without undue delay, in the case of the outbreak of any epidemic or infectious disease, it seems to me the Council should secure uniformity of action throughout the county, by stating at what point of non-attendance of children it becomes *financially important* to close them. A fall of 10, 15, or 20 per cent. in average attendance would be very differently regarded by different Medical Officers of Health; and on the other hand it must be borne in mind that there are many who, apart from considerations of health, would consider an average daily attendance of, say 75 per cent., a sufficient justification to keep the school open, so that the ratepayers may have educational value for their money, so far as the 75

per cent. who are well enough to attend school is concerned. I fear that in some cases school closure for a period leads to overcrowding of schools for another period. If this be so, and no allowance is made for this beforehand in floor space, it is a matter which needs investigation. It is said that in some cases teachers' salaries vary according to whether the average attendance for the year at their school falls short of, or is in excess of, a given number. If so, from the health point of view, the sooner the system of payment is changed the better."

Scarlet Fever.—In the Administrative County, 94 deaths occurred from scarlet fever, as compared with 102 in 1905, equal to a rate per 1,000 of the population of 0·09 as against 0·10. Of these deaths, 82 occurred in the urban districts, or 0·11 per 1,000, and 12 in the rural districts, producing a rate of 0·06 per 1,000. In the following table corresponding figures are given for three quinquennial periods, and for the past three years :—

SCARLET FEVER.		Mean for 5 years. 1889-1893.	Mean for 5 years. 1894-1898.	Mean for 5 years. 1899-1903.	1904.	1905.	1906.
Urban	{ Number of Deaths...	124	133	134	136	77	82
	{ Rate per 1000.....	0·22	0·22	0·20	0·18	0·10	0·11
Rural	{ Number of Deaths...	40	37	36	25	25	12
	{ Rate per 1000.....	0·17	0·16	0·15	0·12	0·12	0·06

It will be seen from the above figures that the death-rate from scarlet fever was practically the same as in 1905 in the urban districts, and in the rural districts only one-half what it was. Also, both the urban and rural rates are very much lower than the corresponding figures for the previous three quinquennial periods.

The Medical Officer of Health of Brierley Hill writes :—
 "I find that the public are now demanding isolation, and whereas a few years ago one had great difficulty in persuading parents to allow their children to go, they are inclined to treat a refusal as a grievance.

"This is due a good deal to the fact that scarlet fever has lost much of its terrors, because from being at one time a very dangerous disease, it is now quite the exception to get a fatal case.

"I think the Hospital Committee will have to take into consideration the question of making further provision for these cases. During the period when we had to isolate enteric fever cases we were unable to isolate scarlet fever at the same time, but if a separate block were provided there would be no difficulty, and I think the provision is really necessary.

"There were two cases in which an order had to be obtained for removal, and I think the objection of the parents was because the child did not appear to be ill. Those, however, are the cases which need most looking after.

"There were three cases of failure to notify in which I asked for a summons to be issued. The parents pleaded ignorance, as they always do. They were brought before the Council and censured, and no doubt this would be a warning to those parents. It would not have the same influence upon the public as a public exposure of such negligence would have. I do not believe in the plea of ignorance, and I hope, if we get a clear case of negligence again, the Council will deal with it summarily, as I am sure one example would have a wholesome effect, by calling attention to the consequences of such negligence."

The Medical Officer of Health of Coseley embodies in his report a special report upon an outbreak of scarlet fever, which he presented in November, 1906, from which I extract the following :—"As I have many times pointed out to your Committee the means at our disposal for checking the spread of the disease are insufficient. This arises chiefly from the impossibility of securing anything like satisfactory isolation and disinfection in the homes of the working-classes. The cases are mostly nursed downstairs in the living room common to the whole family. The majority of parents adopt no precautions, and many mild cases remain unnotified, being represented by the parents as some trivial non-notifiable affection. Several instances of this are forthcoming as a result

of visits to the homes of children reported to be absent from school from some other cause, and I have brought cases to the notice of your Committee which would warrant conviction if the offenders had been proceeded against. At the present time the disease is chiefly prevalent amongst the children attending the Broad Lanes Council and Christ Church Voluntary Schools, and several children supposed to be suffering from German measles undoubtedly have scarlet fever. Within the last few days I have also discovered two cases of ordinary measles in the Broad Lanes district. I therefore beg to recommend the closure of the infant departments of these two schools for a period of three weeks, with a view to checking the spread of these diseases, and that prior to re-opening they be thoroughly disinfected. On November 14th, owing to information received, I visited the Christ Church Schools and found a girl still infectious as the result of scarlet fever, which had not been notified. On visiting her home, I discovered a younger sister also suffering from the disease. This family had been visiting another family, where I found two other unnotified cases. I recommend that the parents should be prosecuted, both for allowing their children to be about, and also for non-notification. As your Council are aware, it is expected that the County Council will shortly resume the interrupted negotiations with your district and others regarding the provision of an isolation hospital for scarlet fever, which would certainly be a great boon to this district."

By way of illustrating how difficult it is to curtail the spread of this disease, I quote the following from the report of the Medical Officer of Health of the Borough of Stafford :—
 " In the first week of November I found a child was attending the infants' school in Corporation Street peeling freely, and there was the history of her having been ill three weeks previously with sore throat, accompanied by a rash. The child was, of course, promptly isolated ; but not before it had spread infection, for eight other cases, I think, may be said to have arisen from her. The school was closed for a week, to cover the incubation period, and disinfected. The 47 cases occurred in 40 houses. This shows how seldom the disease spreads to the other members of a household when

the first case is seen early and promptly isolated. Isolation in hospital was resorted to in 45 instances, or 95 per cent. No deaths occurred."

Diphtheria and Membranous Croup.—

In the Administrative County, 143 deaths occurred from diphtheria and membranous croup, as compared with 169 in 1905, equal to a rate per 1,000 of the population of 0·15, as against 0·18. Of these deaths, 120 occurred in the urban districts, or 0·16 per 1,000, and 23 in the rural districts, producing a rate of 0·11 per 1,000. In the following table corresponding figures are given for three quinquennial periods and for the past three years :—

DIPHTHERIA.		Mean for 5 years. 1889-1893.	Mean for 5 years. 1894-1898.	Mean for† 5 years. 1899-1903.	1904†	1905†	1906†
Urban	{ Number of Deaths...	28	132	230	175	125	120
	{ Rate per 1000.....	0·05	0·22	0·34	0·24	0·17	0·16
Rural	{ Number of Deaths...	21	39	72	28	44	23
	{ Rate per 1000.....	0·09	0·17	0·31	0·14	0·22	0·11

† Including Membranous Croup.

The Medical Officer of Health of Audley, where 33 cases occurred, states, that, with one exception, the cases occurred in the populous and least sanitary part of the district.

The Medical Officer of Health of Biddulph writes with reference to this disease :—" I personally visited most of the premises where cases occurred. The opinion I finally arrived at was that there was probably a large number of ' carrier ' cases (besides those notified), which were of an exceedingly mild type, and unrecognised. If this view be correct, it is evidence of the commencement of a change in the ' type ' of the disease, similar to that which has long been recognised in scarlet fever, and is of the greatest possible importance."

The Medical Officer of Health of Bilston writes :—" Bacteriological examination is now almost universally in use, by which doubtful cases are discovered, and cases of sore throat not of diphtheritic origin are excluded, and it is to be

regretted that in no case in this town was this aid sought to confirm or correct the diagnosis, although the arrangements made by the County Council with the Birmingham University provides for this in all supposed cases of diphtheria, enteric fever, and phthisis free of cost. Some of the cases notified were certainly very slight."

The Medical Officer of Health of the Borough of Burslem calls attention to a mortality of 11 per cent. of the cases, compared with 26 per cent., which was the mean mortality for the previous eight years, and he points out that anti-toxin, which is supplied free to those who cannot afford to pay for it, is used practically in every case.

The Medical Officer of Health of Cannock Urban District congratulates his Authority on having sanctioned the free supply of anti-toxin serum when it is needed.

The Medical Officer of Health of Coseley writes under this heading :—" This district has continued free from any serious outbreak of these diseases for some years, but should occasion arise it is highly desirable that your Council should supply anti-toxin free to those unable to pay for it. I understand that the absence of a declaration by the Local Government Board as to the legality of such a practice is your only reason for not supplying it."

The Medical Officer of Health of Fenton writes with reference to the use of anti-toxin :—" The total cost, including cost of anti-toxin and fees to medical men, amounted to £86 ros. 6d., giving an average cost per case of a little over £1.

" The average cost per case removed to the isolation hospital was £6 8s. 6d.

" The saving through use of the alternative method of injection of contacts has therefore been very considerable.

" The number of units injected for curative purposes varied from 2,000 to 8,000 according to age of patient and time elapsed since date of onset of illness.

" The number of units injected for prophylactic purposes was in nearly all cases 1,000."

Later on in the same report the following appears :—
 “ There was not a single subsequent case in any house where contacts had been injected ; whereas in one house where the patient was removed to hospital, and no anti-toxin employed, four subsequent cases occurred at the house, and one residing at another house, but who had been in contact with the patient, subsequently contracted the disease.”

The Medical Officer of Health of Kids Grove points out that in only one month was the district free from the disease, and, as regards the New Chapel Ward, he gives as one of the reasons the absence of a sewerage system.

The Medical Officer of Health of the Borough of Newcastle, where 13 cases occurred, only one of which was fatal, writes :—
 “ The reduction of the mortality from this disease is most gratifying, and points to the general use of the anti-toxin serum in these cases. My authority supply the anti-toxin serum free of charge, when applied for, to the lower classes of the community.”

The Medical Officer of Health of Sedgley calls attention to the fact that, for the first time during ten years, no deaths occurred from diphtheria.

The Medical Officer of Health of Smallthorne writes :—
 “ Anti-toxin is used in the majority of cases with very good results, and I am pleased that the Council saw the wisdom of supplying it free to those giving satisfactory evidence of being unable to provide it for themselves.”

The Medical Officer of Health of the Borough of Smethwick writes :—“ The facilities afforded by the arrangement of the Staffordshire County Council with the Birmingham University for bacteriological examinations have proved of very great service in the attempts that have been made to control the spread of the disease. The large majority of the cases notified have been submitted to this test, and in almost all positive cases further examinations have been made at intervals, and only when a negative result has been obtained has the patient been pronounced free from infection.”

The Medical Officer of Health of the Borough of Stoke-on-Trent writes :—" Post cards were regularly sent to schools notifying the presence of the disease in houses, and requesting the exclusion of all children from such houses till further notice. In such cases the children have been excluded from school until a fortnight after disinfection of the house. Post cards are now being sent to the schools stating when the children might be admitted.

" Post cards are sent each week to every medical man in the borough, notifying the presence of the disease in the different streets where it has occurred during the week. This is done in the case of all the notified diseases.

" Since 1900, the Health Committee have supplied anti-toxin free of charge for prophylactic use in the borough, and pay a fee for its use. The cost to the borough of anti-toxin and fees for its use for preventive purposes was £5 7s. 6d."

The Medical Officer of Health of Stone Urban District writes :—" It is satisfactory to know that your authority are willing to pay for anti-toxin in the future in necessitous cases. How far the resolution of your authority sanctioning such payment is retrospective for the earlier part of the year I do not know, but there can be no doubt that the use of the anti-toxin has lessened the death-rate, and acted as a prophylactic in the cases where it was used for that purpose."

The Medical Officer of Health of the Borough of Wednesbury writes :—" Of diphtheria, 47 cases were notified, as against 75 in 1905. There were three deaths, which was at the rate of about 6 per cent. of the cases. Here, again, we must conclude either that the disease operated in a more than ordinarily benign manner or that the serum treatment was very widely employed—or again, both factors may have contributed to the result, and this last is probably the correct explanation of the very low percentage of deaths. The cases which came under my own treatment were certainly for the most part of a mild character."

The Medical Officer of Health of Wolstanton, where 66 cases occurred, with a mortality of 13·6 per cent., writes :—" This is a high mortality, and is chiefly due to the fact of the

early symptoms of diphtheria having been neglected. In at least three or four of these cases, medical assistance was not called in until within a few hours of death. The value of the anti-toxin treatment of diphtheria is thereby lost, as it is successful in direct proportion to the day of the disease in which it is injected."

In relation to the Wolstanton experience, the following extract from the report of the Medical Officer of Health of the Cheadle Rural District is interesting :—"As remarked in last year's report, it is worthy of note that the mortality from diphtheria has fallen considerably in recent years—this being due chiefly, no doubt, to the use of the anti-toxin serum, which is now recognised as the ' sheet anchor ' of the profession in the treatment of the disease. On the other hand, it appears probable that the disease is of a milder type than formerly. To obtain the best results from the anti-toxin serum it has to be used very early in the disease, and in this connection it may be mentioned that the District Council has adopted the recommendation made in last year's report, to supply the serum free of charge where the patients are too poor to provide it. The present arrangement is that the medical practitioners in the district shall have the cost of the anti-toxin serum refunded to them on making application to the District Council."

In the Lichfield Rural District there were 45 cases with four deaths ; in the Seisdon Rural District, 13 cases, with one death ; and in the Stone Rural District, 37 cases, with only two deaths. The Medical Officers of Health of these districts attribute the low mortality to the free use of anti-toxin serum.

Whooping Cough.—In the Administrative County, 340 deaths occurred from whooping cough, as compared with 267 in 1905, equal to a rate per 1,000 of the population of 0·36, as against 0·27. Of these deaths, 305 occurred in urban districts, or 0·41 per 1,000, and 35 in rural districts, producing a rate of 0·17 per 1,000. In the following table corresponding figures are given for three quinquennial periods and for the past three years :—

WHOOPIING COUGH.		Mean for 5 years. 1889-1893.	Mean for 5 years. 1894-1898.	Mean for 5 years. 1899-1903.	1904.	1905.	1906.
Urban	{ Number of deaths....	257	240	223	306	238	305
	{ Rate per 1000.....	0.46	0.40	0.33	0.42	0.32	0.41
Rural	{ Number of deaths....	54	54	44	81	29	35
	{ Rate per 1000.....	0.23	0.23	0.19	0.41	0.14	0.17

Under this heading, the Medical Officer of Health of Sedgley writes :—" The disease was of a very severe type, and the epidemic was quite the worst we have had for 20 years. Fortunately, from a statistical point of view, all the deaths did not occur in 1906, and I regret to state that in next year's report there are, at date of writing this report (April, 1907), 30 deaths to record as compared with the 22 now commented on. Sanitary conditions affect this disease but little, if at all, and its occurrence and results in such a severe form must be discounted in taking the zymotic death-rate, one of the popular and press tests for a district. It began at the onset of a very severe winter, and the chest complications which supervene upon this complaint are specially fatal in our district, placed, as one-half of the population is, on one of the highest watersheds in England, fully 700 feet above sea level. It is, however, to be regretted that parents often think too lightly of its dangers, and often carry their children to surgeries in the district on cold mornings or evenings, and thus pneumonia occurs, with a fatal result almost always. Children suffering from whooping cough require to be kept in a warm room if complications are to be avoided."

Enteric Fever.—This disease, which must be looked upon as entirely preventable, caused 101 deaths, as against 91 in 1905, equal to a rate of 0.10, as compared with 0.09. Of these, 90 occurred in urban and 11 in rural districts equalling, a rate respectively per 1,000 of the population of 0.12 and 0.05. In the following table corresponding figures are given for three quinquennial periods and for the past three years :—

ENTERIC FEVER.		Mean for 5 years. 1889-1893.	Mean for 5 years. 1894-1898.	Mean for 5 years. 1899-1903.	1904.	1905.	1906.
Urban	{ Number of deaths....	98	124	118	86	87	90
	{ Rate per 1000.....	0·17	0·20	0·17	0·12	0·12	0·12
Rural	{ Number of deaths....	30	19	22	8	4	11
	{ Rate per 1000.....	0·12	0·08	0·09	0·04	0·02	0·05

The Medical Officer of Health of Amblecote, where five cases occurred in two houses, points out that the district has been almost exempt previously.

In Bilston, where 15 cases occurred, causing no less than five deaths, the Medical Officer of Health points out that all the cases occurred in the poorer parts of the town, and in houses with privy middens or “ vaults.”

From the following extract from the report of the Medical Officer of Health of Darlaston, it would appear that his Authority are not in the habit of exercising their powers to compel the removal to hospital of cases which cannot be left at home without seriously endangering the other members of the family, and it is to be hoped that his recommendation will be acted upon in the future. He writes:—“ The house implicated (and fortunately the only one in this area) contains three rooms—two bedrooms and a kitchen, the inmates numbering seven persons.

“ The first to become affected was a lad of 16, whose removal to hospital was opposed by his parents. A second contracted it two weeks later, and on strong representations being made, his removal was sanctioned. Two other members of the family subsequently became infected, but consent for conveyance to hospital was given only in the case of one, the other in consequence being treated at home.

“ The attitude of relatives frequently makes removal to hospital anything but an easy matter, and as it is especially important in poor and frequently overcrowded houses, in the absence of nursing facilities, to isolate the sick from the healthy, I would suggest that, in future, when the special

circumstances mentioned exist, that removal be made compulsory, since inefficient isolation of a member of a family is equivalent to being without 'proper lodging or accommodation,' and as such, the case can be legally removed without consent."

The Medical Officer of Health of the Borough of Longton sets forth, in the form of a table, certain sanitary details in houses where cases occurred. This information, if continued for a number of years, especially as regards closet accommodation, will prove valuable, but it would greatly increase its value if the table also recorded the relative numbers of different types of closets in the whole district.

The Medical Officer of Health of Tipton, where 54 cases occurred, of which 16 proved fatal, advocates a more general introduction of the water-carriage system.

Diarrhœa.—In the Administrative County, 932 deaths occurred from diarrhœa, as compared with 512 in 1905, equal to a rate per 1,000 of the population of 0·98, as compared with 0·54. Of these, 860 occurred in urban and 72 in rural districts, equalling a rate respectively of 1·16 and 0·36. In the following table corresponding figures are given for three quinquennial periods and for the past three years:—

DIARRHŒA.		Mean for 5 years. 1889-1893.	Mean for 5 years. 1894-1898.	Mean for 5 years. 1899-1903.	1904.	1905.	1906.
Urban	{ Number of deaths...	405	581	569	713*	485†	860
	{ Rate per 1000.....	0·73	0·97	0·84	0·98	0·66	1·16
Rural	{ Number of deaths...	89	93	81	45	27	72
	{ Rate per 1000.....	0·38	0·41	0·35	0·22	0·13	0·36

* Including 34 deaths from "enteritis."

† " 9 " " "

The Medical Officer of Health of Brierley Hill writes under this heading:—"I think there should be a trained nurse in every district who can render assistance wherever and whenever she is needed, especially to help the poor and least intelligent in the nursing of sick children, to see that they are provided with the necessary means and medical assistance, and report to the Medical Officer of Health where they are not."

I quote pretty fully from the report of the Medical Officer of Health of Handsworth under this heading, because his remarks are so generally applicable and so worthy of the attention of District Councils. He writes :—" The causation and prevention of this ' preventable ' disease cannot be too strongly or too often brought before your notice, seeing that the mortality from diarrhœa is by many considered to be a test of the health of a district.

" One obvious reason why hot weather favours diarrhœal diseases is that in hot weather putrefactive changes are more likely to occur in our foods. Our foods ought to be kept in the coolest place to be found in the house. In the great bulk of the houses in this district the food pantry is in the closest connection with the warmest room in the house, namely, the cooking kitchen. Without any great addition to the cost of building, a suitable pantry could surely be provided, and it should be regarded as one of the most important public health duties of any sanitary authority to insist upon adequate provision of this kind in every new building. Plans should not be acceptable unless they show a properly-placed and well-ventilated pantry for storing food.

" Flies probably play a very important part in the contamination of food, and also in the direct spread of typhoid fever and ' summer diarrhœa,' during the summer months. In fact it would probably be no exaggeration to say that they play the chief part in the dissemination of these diseases in towns.

" Closely associated with diarrhœal diseases and the plague of flies is the problem of the disposal of horse manure from town stables. In this district it does not appear to be realised that the urban character of the place demands very different methods to those which have been sufficient while the surroundings were of a rural nature. Possibly the extraordinarily rapid growth of Handsworth may be the cause of this lack of appreciation. Many stables are without adequate storage for manure, and those stables possessing a proper manure bin do not empty it with sufficient frequency. In a district such as this a rule should be made that every manure bin must be emptied at least once a week, and this

rule should be rigidly enforced. To allow accumulations of horse manure in yards surrounded by dwelling houses is to cause continual pollution of the air in the neighbourhood and to inflict a plague of flies upon the inhabitants. In such neighbourhoods the general health is bound to deteriorate, not only on account of the inhalation of polluted air, but also because of the constant contamination of the food by flies, and a predisposition to such diseases as diphtheria, diarrhœa, and typhoid fever is set up. In other words, the resistance of such individuals to attack by these diseases is thereby weakened. Looking at the matter from another point of view, it is surely reducing sanitary administration to a farce to compel householders to provide water-closets, on the ground that the accumulation of human excreta near the house constitutes a possible danger to health, while an almost unlimited accumulation of horse manure, with at least equal possibilities for evil, is permitted. Such a laxity constitutes, in my opinion, a serious danger to health, and I have no hesitation in advising the necessary alteration of the bye-laws to enable a weekly removal to be enforced. A bye-law similar to the one enforced in Birmingham is urgently necessary. This reads :—‘ He shall, once at least in every week, remove or cause to be removed from the receptacle provided all dung, manure, soil, filth, or other offensive or noxious matter produced in or upon such building or premises and deposited in such receptacle.’

“ Another matter intimately associated with general sanitary conditions and surroundings is the erection of stables and small buildings in the district. The constant erection of stables and small buildings is a serious evil and a source of nuisance and danger to the surrounding inhabitants.

“ Increased powers to insist upon adequate provision of well-ventilated pantries and storage for coal, as well as proper receptacles for ashes, in all new houses, are also advisable in the interests of the public health.”

The Medical Officer of Health of the Borough of Newcastle, where 30 cases of diarrhœa proved fatal, 20 being infants under one year, writes :—“ These deaths occurred in the few weeks of extremely hot weather which we experienced at the end of August and early in September. Nearly all the deaths of

infants were those who were artificially fed, the breast-fed infants almost entirely escaping. This points to the extreme care which is required in preparing the foods of infants fed artificially, and also to the great cleanliness required in the care of bottles, teats, etc."

The Medical Officer of Health of Willenhall points out that a very large proportion of infants who died from diarrhoea were hand-fed.

Cholera.—No mention is made of this disease in any of the reports under review.

Erysipelas.—Little reference is made to this disease in any of the reports.

Puerperal Fever.—In the Administrative County, 38 deaths were attributed to puerperal fever, as against 30 in 1905. In only a few of the reports is any special reference made to the circumstances attending the cases.

The Medical Officer of Health of Cannock Urban District writes :—" There is, on the whole, no doubt a marked improvement as the result of the administration of the Midwives Act, when compared with the insanitary surroundings of former years in confinement cases."

The Medical Officer of Health of Tipton writes :—" The nurse midwives are much more efficient than they were previous to the passing of the Midwives Act. They are cleaner in themselves, more attentive to the sanitary condition of the patient, and more careful in sending for medical aid when requisite. There is, however, much room for improvement, and I trust that in the near future, the present old nurses will be succeeded by younger, better educated, and certified midwives."

The Medical Officer of Health of Willenhall states that the deaths from puerperal fever were more numerous than in any year since 1872, when records were first kept.

The Medical Officer of Health of Gnosall Rural District writes as follows :—" Though I am pleased to be able to say that a reference to former reports shews me that this disease

is not prevalent in this district, I am afraid that this must be looked upon as owing largely to good fortune, as I find that the district, as a whole, is badly supplied with midwifery nurses, and so far the Midwifery Act of 1902 has only been of benefit by reducing the number of incompetent midwives in actual practice. Their place, as yet, however, has not been filled up by any more competent, and I take this opportunity of pointing out that one of the greatest boons that could be conferred on this district would be the supply of a sufficient number of trained nurses to take up this work, as at present it is mostly carried on by nurses whose sole claim to being on the register is not that they have received instructive hospital teaching, but merely that they were able to claim registration from having already done this work for a period of at least twelve months; and from personal observation I am able to say that this does not mean efficiency. I understand that a County Nursing Association is in process of formation to take up this work, and I would recommend that it should be applied to for help in this matter."

Influenza.—It would appear from the reports under review that influenza again occurred in most parts of the county, and that the disease was attended with bronchitis and pneumonia in a good many cases.

With the exception of Cannock Urban District, where the disease is said to have been prevalent in the first two months of the year, it does not appear to have shown any seasonal preference in most districts, especially in the south of the county.

The Medical Officers of Health of Rowley Regis, Smethwick, Tamworth (Urban and Rural), and Wednesbury make special reference to the fact that the disease prevailed throughout the year.

Diseases of the Respiratory Organs.—Under this heading, which does not include phthisis, 2,348 deaths occurred, as compared with 2,760 in 1905. None of the reports contain any remarks regarding these diseases which call for special reference.

Phthisis.—In many of the reports considerable prominence is given to the question of the causation and prevention of phthisis, from which disease no fewer than 836 deaths have resulted during the year.

With reference to the notification of phthisis, the Medical Officer of Health of Biddulph points out that the voluntary system has failed, and predicts that compulsory notification will, sooner or later, be enforced.

The Medical Officer of Health of Handsworth writes with reference to a death-rate from tuberculous diseases of 0·86 per 1,000 for the year, as follows :—“ It is a matter of very great congratulation that this represents the lowest recorded death-rate from tubercle in this district. Possibly part of the diminution of the death-rate is due to the disinfection of the bedding and premises where there is registered a death from tuberculous disease. In all these cases disinfection is offered, but it is a matter of great regret that in a few cases the offer is refused. No effort should be spared to educate the public in this matter in order that tuberculous diseases may be regarded as infectious and therefore preventable. It is probable that some scheme of notification of these diseases would eventually bring about a still further reduction in this death-rate.”

With reference to the recent report of the Royal Commission on Tuberculosis, the same Medical Officer of Health writes :—“ It is now placed beyond all ordinary doubt that infection of human beings by tuberculous milk and meat is not only possible but probable. The public should therefore insist upon such measures being taken as are necessary to remove all suspicion from these important foods. It should be a matter of no insuperable difficulty to effectually stamp out bovine tuberculosis altogether, and once and for all to remove this grave danger of infection. The necessary procedure and expenditure would probably only be undertaken, however, in response to strong public feeling in the matter, so that it is desirable that all districts should join in making the usual representations to the Government.

“ While this is being done it will be a deplorable result of the Commission’s report if, as a consequence, the amount of milk given to children is decreased. I have no hesitation in saying that very many more children die as the result of an insufficient supply of milk than from infection caused by tuberculous milk. Also a far greater number of people at all ages die from tuberculosis as a result of a deficient rather than an infected milk supply during infancy. Nevertheless, the stamping out of bovine tuberculosis presents itself as an undoubted means whereby the terrible death-roll due to tubercle may be considerably decreased. When this is accomplished it will be possible to duly appreciate other causes of the disease and to eventually eradicate it.”

The Medical Officer of Health of Heath Town regrets that the proposal to provide a County Sanatorium fell through. He also advocates voluntary notification in order, more especially, that the houses where living cases exist may be disinfected, a preventive measure which can now only be adopted on the existence of a case becoming known through the death returns.

In the Leek Urban District it would appear that an arrangement has been made with the Registrar to send special notices of deaths from phthisis, and to facilitate this notification post cards have been supplied to him. By this plan, at any rate, the houses in which deaths occur can be disinfected without delay. It is said that no opposition to this procedure is met with.

The Medical Officer of Health of Quarry Bank advocates compulsory notification.

In the Borough of Smethwick voluntary notification is in force, and in 13 cases notified during the year disinfection was carried out.

The Medical Officer of Health of Tunstall advocates voluntary, if not compulsory, notification.

The Medical Officer of Health of Willenhall suggests, that, having regard to the second interim report of the Royal

Commission on Tuberculosis, the District Council should have all the dairy cattle examined for tubercle without delay.

In the report of the Medical Officer of Health of Tamworth Rural District the following paragraph appears :—" At a meeting of the Council, held on January 6th, it was resolved that the Infectious Diseases (Notification) Act, 1899, should apply to the disease known as phthisis, throughout the whole of the Rural District of Tamworth. The Order to come into operation on March 1st."

No mention is made in the report as to whether the sanction of the Local Government Board has been obtained to the inclusion of phthisis among the diseases compulsorily notified in this district, but without such sanction the Order would be inoperative, and hitherto the Board have not favoured such proposals from other districts.

ZYMOTIC DISEASE PREVENTION.

Isolation and Disinfection.—In most of the reports, both for urban and rural districts, this question is very fully dealt with.

In the table at the end of this report, headed " Result of the Working of the Compulsory Notification of Infectious Diseases Act," figures are given showing to what extent isolation hospitals are made use of in districts where they exist. It will be noticed that the use made of them varies very considerably, and in most cases it is evident that they can be of little practical value in curtailing epidemics—the chief purpose for which they are intended.

The percentage of infectious cases isolated in urban districts where hospitals are available and have been available during the year varies very much—from *nil* in Audley, Brownhills, Cannock, Darlaston, Rowley Regis, Sedgley, Smethwick, and Wednesbury Urban Districts, and Eccleshall and Mayfield Rural Districts, to 87·3 in Leek Urban District, and 79·0 in Cannock Rural District.

The Medical Officer of Health of Bilston says that a new hospital, which was opened in February, is a great improvement on the old one.

The Medical Officer of Health of Brownhills congratulates his Authority on having provided an efficient disinfecting apparatus but as regards hospital accommodation, he writes :—
 “ we have an isolation hospital going to decay waiting for the advent of small-pox, while other regularly prevalent zymotic diseases are rampant among us and might easily be stamped out by its timely use.”

The Medical Officer of Health of Cannock Urban District writes :—“ The Joint Small-pox Committee have decided to build a hospital for small-pox cases on a suitable site near Pye Green, and the Urban and Rural District Councils have applied to the Local Government Board for a joint loan of £3,000 to defray the cost of the building, which will be shared equally by the two Councils.”

The Medical Officer of Health of Darlaston writes :—
 “ Provision having now been made for the reception of small-pox in the South Staffordshire Joint Hospital, our own, which was originally used for the same diseases becomes available for the admission of enteric fever cases.

“ Only those were admitted that it was found impossible to satisfactorily nurse at home. Five such were treated there during the year, and of these one terminated fatally.

“ The present disinfecting apparatus, though temporarily repaired is obsolete, and of doubtful utility. I would recommend that one of modern design be procured at an early date.

“ We now possess a portable spray apparatus for the disinfection of rooms.”

As will be seen from the following extract from the report of the Medical Officer of Health of Fenton, an arrangement has been made with school teachers which is worthy of imitation in other districts :—“ Since November, 1906, the school teachers have, however, supplied me daily with lists of all scholars suffering from measles, whooping cough, and chicken pox, as well as all suffering from any kind of sore throat. All cases of infectious disease notified by medical practitioners are at once notified to teachers in the case of school children.”

The Medical Officer of Health of Handsworth writes :—
 “ The question of hospital accommodation is one that must receive consideration at an early date. As it is a matter upon which I propose shortly to submit a special report, I need not discuss it further here, except to say that the position of this district with regard to its provision against such an emergency as a serious epidemic is an exceedingly dangerous one.”

With reference to the part played by schools in spreading scarlet fever, the same Medical Officer of Health writes :—
 “ In many cases, one or more children attended school after a scarlatina rash had appeared in one of the family kept at home.

“ Several cases of scarlet fever having been associated with Boulton Road Schools a systematic inspection of the scholars was made. Three scholars were found in the ‘ peeling ’ stage, and several others were sent home as suspicious cases. These afterwards developed the disease. The affected classrooms were carefully disinfected, and all suspicious causes of absence were investigated by the Medical Officer. As a result the disease quickly disappeared from the locality. Similar steps were shortly afterwards taken with regard to Wattville Street Schools. Energetic measures of this kind are usually far more satisfactory than closing the schools. Their complete success, however, depends to some extent upon the active and intelligent co-operation of the teachers.”

The Medical Officer of Health of Leek Urban District writes :—“ In April, Dr. Fletcher, Local Government Board Inspector, held an inquiry *re* the borrowing of money for hospital extension. He approved of our proposals and plans, and in addition required more bedroom accommodation for the nurses to be built outside the wards. Plans and specifications are now ready, and the building will be commenced as soon as the weather permits. When completed, we shall have full accommodation for 18 cases, distributed in two wards of six beds each, one ward of three beds, and three small observation wards of one bed each. We shall also have a well-equipped discharging block and a separate building providing bedrooms for nurses.”

The Medical Officer of Health of the Borough of Newcastle writes :—" There is some risk and trouble in the present method of discharging patients owing to the want of a proper discharging block, and when all three pavilions are in use, this risk is greatly increased.

" We urgently require a new and proper ambulance, there is a great risk in using the present ambulance for the removal of patients suffering with enteric fever, and it is a risk which the officials should not be called upon to take."

The Medical Officer of Health of Quarry Bank, where 80 cases of scarlet fever were notified, only one of which was isolated in hospital, says he understands the Authority cannot afford the expenditure involved in isolating such cases.

The Medical Officer of Health of Rowley Regis states that the disused small-pox hospital, " which has again fallen into disrepair," is to be repaired and kept in readiness for the isolation of enteric fever cases if found necessary. From my own knowledge of the dilapidated state of this building, which is merely a temporary structure, I have no hesitation in saying that the District Council are most unwise in coming to any such determination, and that the proper course to take is to demolish the building altogether.

The Medical Officer of Health of Rugeley writes :—" For many years in succession I have had occasion to mention the fact that no means are provided for disinfecting bedding and clothing. No means of disinfection can be considered complete unless the mattresses and such articles of bedding and clothing as have been used by or in close proximity with the infected sick, and which cannot be boiled, are subjected to the less injurious process of disinfection in vacuo by heat, for which purpose a proper apparatus is necessary, and I would again strongly urge your Council to consider the matter in the light of urgency and release me from the necessity of year after year reviving a request which it undoubtedly is my duty to do. The only alternative is destruction of such articles by burning, which, if adopted, would, to my mind, be a greater burthen to the rates than the provision of a disinfecter."

Under the heading, "Scarlet Fever," the Medical Officer of Health of Sedgley writes :—"Fortunately, the disease was of a mild type, as it has been for the past seven years. It may, however, at any time become more malignant, and we may expect in the near future a County Council scheme for this and kindred diseases, by which an isolation hospital will be provided, for isolation and trained nursing are impossible in the houses of the working classes. There can be no doubt that economy and efficiency can best be secured by combination with neighbouring authorities, and it is to be hoped that the financial burden will be lightened by combining your district with other larger districts. It would probably lessen expense were cases of typhoid fever treated in the general hospitals in the district, as is done in some places. In this way only scarlet fever and diphtheria cases would require to be provided for."

The Medical Officer of Health of Smallthorne states that his Authority have definitely decided to come to an arrangement by which they make use of the hospital recently erected by the Burslem Corporation.

The Medical Officer of Health of the Borough of Smethwick states that the Smethwick and Oldbury Joint Isolation Hospital is now in course of erection.

The Medical Officer of Health of the Borough of Stafford writes :—"There have been 45 cases admitted during the year—all scarlet fever. At the beginning of the year the cases were few, and during May, June, and July the hospital was empty. From August onwards the number of cases increased steadily, until the capacity of the wards and the annexe was tested to the full extent, 20 patients being treated at one time. The lease of these temporary premises is now expiring, but satisfactory arrangements have been concluded whereby we can remain tenants until such time as we can acquire other premises. I am glad to know that the Health Committee is fully alive to the serious position it is in with regard to this provision, and I feel sure the outcome of its present deliberations will be one which will meet the requirements of a town of the size and importance of Stafford."

The Medical Officer of Health of Tunstall writes :—
 “ During the last three months of the year we have been associated with the Burslem Corporation in the use of their well-equipped new isolation hospital, and as there will now be no difficulty in the matter of accommodation for our patients, I am hopeful the arrangements will be attended with gratifying results in the diminution of infectious cases.”

The Medical Officer of Health of Wednesfield writes with reference to an outbreak of scarlet fever in the district :—
 “ As pointed out in my last annual report, it is very unsatisfactory to attempt to isolate such cases at the various homes of the patients, and I would again respectfully urge on the Council the desirability of providing a proper place of isolation for such. It is very probable that the epidemic might have been stayed had we been so fortunate as to possess such a place ready for the reception of the *first case* which occurred. One case took place at the Cottage Homes, but it was removed to the Borough Isolation Hospital on the same day it was discovered and no further case has occurred there. This fact, I think, speaks eloquently as to the good results of immediate isolation in an institution provided for the purpose.”

The following quotation from the report of the Medical Officer of Health of Willenhall serves to show the need there is for isolation hospital provision for that district :—“ Cases of scarlet fever were more numerous than in any year since 1881, and gave a great deal of trouble ; but the fatality was nothing like as great as it used to be. Although there is still a great deal of carelessness on the part of those who have charge of patients, many more cases are well looked after now than used formerly to be the case. Only one of the 168 cases was treated in a hospital. Six cases in one house, in Queen Street, with two bedrooms, and other persons not ill in the house besides, again demonstrated the need of an isolation hospital. Satisfactory isolation was secured on tailors’ premises in Cross Street and Cemetery Road, and dressmakers’ premises in Albion Road and Gipsy Lane. Children were sent home ill or in the peeling stage from Walsall Road and Russell Street Schools, and instructions as to disinfection were given. A butcher left his home, and was satisfactorily removed from

infection, whilst he still carried on his business. Several small retailers of sweets were induced to discontinue sale until risk of conveying infection was over. A laundry woman in Fletcher's Lane discontinued receiving clothing for several weeks in consequence of infection. Four teachers in elementary schools were satisfactorily housed away from home whilst there was infection at home."

The Medical Officer of Health of Wolstanton writes :—" Since the opening of the new infectious diseases hospital in Burslem, last May, the Bradwell Sanatorium has proved amply sufficient to meet the needs of the district, and no cases have been refused admission for want of room since last April."

The Medical Officer of Health of Cannock Rural District writes :—" With so many centres of infection, with scarlet fever much in evidence in Wolverhampton, Walsall, and Cannock Urban, without the advantages of our isolation hospital we must inevitably have doubled or trebled the cases. The single fatal case at the hospital, in a girl of 13 from Bushbury, the symptoms were of the gravest character upon admission. The parents of the child were quite willing, in the interests of their other children, for the girl to be removed. The symptoms were of a septic character, with speedy collapse."

With reference to the isolation of cases of small-pox, the same Medical Officer of Health writes :—" The Joint Small-pox Committee have decided to erect a hospital for the reception of cases of small-pox on a site at Pye Green, according to plans prepared by Mr. H. M. Whitehead. The cost of the building is to be defrayed by means of a loan, and application has been made by the Urban and Rural District Councils to the Local Government Board to sanction a joint loan of £3,000 for this purpose. The cost of the hospital is to be borne equally by the two Councils, and an agreement to this effect, to run co-terminous with the lease of the site, will be drawn up. I approve of the site in every way, and in my opinion the two Councils have taken a course which will be of great advantage to the community in any future outbreak of small-pox."

The Medical Officer of Health of Cheadle Rural District writes :—" In last year's report it was mentioned that the

District Council had applied to the County Council for an annual grant towards the maintenance of the hospital. Since then the matter has been carried through, and the County Council contribute about one-third of the annual cost.

“Several important improvements have been carried out at the hospital during the year. A Thresh’s disinfecter has been erected. A new mortuary, detached from the other buildings, has been built, the old mortuary, as well as the original disinfecting room, having been utilised to place the disinfecter in. A new ‘discharging’ block has been erected, and consists of a two-storey building, placed near the entrance to the hospital. Downstairs, is an undressing room, leading into a bath room (with hot and cold water), and this opens into a dressing room, so that the patients in process of discharge after leaving one room do not re-enter it again, but pass straight through from one room to another. Upstairs, is a storeroom, and a bedroom for the porter, access to both of which is gained by means of a staircase from the outside of the building, and which does not communicate with any of the ‘discharging rooms.’

“The ambulance carriage has been altered so as to permit of the patients being conveyed in the recumbent position.

“The hospital (resident) staff consists of the Matron, four nurses, laundress, maid, and a porter.

“The entire cost of the building (about £2,400), including the recent additions, has been borne by the District Council.”

With reference to this hospital, the District Council are to be congratulated on having erected so satisfactory a building for so very reasonable an expenditure. The hospital contains 16 beds, so that the cost per bed only amounts to £150, a much lower figure than in my experience a permanent building of this description has ever before been provided.

The Medical Officer of Health of Uttroter Rural District urges his Authority to make provision for the isolation of small-pox cases.

Vaccination.—It would again appear from many of the reports under review that the last Vaccination Act has been instrumental in increasing the number of vaccinated

children, and, if one could be satisfied that all these were efficiently vaccinated, a considerable advance in this department of public health might be recorded. I fear, however, that in many districts the operation is still very inefficiently performed, owing to what one must characterise as dishonesty on the part of certain practitioners. The proportion of such cases, however, is probably not greater than formerly, and, on the whole, it must be admitted that the Act has served a good purpose. At the same time, it is much to be desired that some guarantee should be enforced which would ensure greater efficiency when the operation is performed by private practitioners.

The Medical Officer of Health of Leek Urban District writes:—"We cannot ignore the fact that there is a considerable opposition to vaccination, in spite of improved methods, vaccination performed at the home, and the use of glycerinated lymph.

"The number of exemptions is 13 per cent. of the total number of births registered, which is much too high for the safety of the community.

"As far as I am able to judge vaccination is efficiently performed. It is, however, a matter of regret that the Act does not compel the private practitioner to vaccinate in four places, as the public vaccinator is obliged to do. It would also, in my opinion, improve the efficiency of vaccination if the Government supplied lymph to all practitioners, inspected the work done, and paid the fees."

In Rowley Regis it would appear that one-half the vaccinations are done by private practitioners, one scar only being made, as a rule, in such cases.

In Tipton, the Medical Officer of Health points out that the majority of children are inadequately protected against small-pox for a similar reason.

In the Borough of Wednesbury there were 68 exemptions on account of conscientious objections, compared with 41 the previous year, and the Medical Officer of Health points out that gradually there is a large number of unvaccinated persons

growing up. Also, it would appear that among those who are vaccinated the operation in many cases has been inadequately performed.

INSANITARY DWELLINGS AND OVERCROWDING.

It would appear from some of the reports that progress is being made in the direction of improved dwellings and reducing overcrowding, but, on the other hand, in some of the districts there is evidently room for more energetic action in this direction on the part of Authorities.

In Biddulph, it is said that overcrowding still exists, because the population increases faster than the supply of new cottages.

The Medical Officer of Health of Bilston writes :—" The erection of new buildings continues to be carefully supervised, and all private drains are submitted to the water test before the certificate that the dwelling is fit for human habitation is issued."

It is satisfactory to read the following in the report of the Medical Officer of Health of Coseley with reference to the question of housing of the working classes :—" Owing to the large number of old houses in the district, a great deal of time is occupied in this work, and 72 houses were considered to be unfit for human habitation. These were dealt with, with the following results :—Eight were voluntarily closed by the owners ; 14 were closed by justices' orders, £13 17s. od. being recovered as costs or penalties from the owners, and five of these were subsequently demolished ; 32 were generally repaired or are in process of repair ; 13 ruinous empty houses were closed and demolished ; five still remain under notice.

" The 10 notices remaining unexpired from 1905 are now complied with, and the houses condemned in 1903 and mentioned in last year's report are closed and demolished.

" The owner of property in Hurst Road, regarding which a special report was required by the Local Government Board in 1905, has voluntarily closed one of the houses and repaired the others.

“ Apart from this work, 18 houses have been spouted during the year, two entirely re-roofed, 12 yards and entries paved, 28 new drains laid, and two cases of overcrowding abated.

“ The Council are to be congratulated on this progress, which I hope will be maintained.

“ The chief faults met with are deficient spouting, absence of or defective yard paving and drains, dilapidated wash-houses, and consequent dampness of walls. Defective ventilation of bedrooms and living rooms, dirty ceilings and walls, and worn and uneven kitchen floors are also commonly met with.

“ Under your new bye-laws the paving of backyards and entries is dealt with, and it is highly desirable that this should be required ; in fact, I consider it one of the most urgent matters coming under your notice, having regard to the frequent fouling of these places which occurs at present with slop-water and by children.”

The following remarks which appear in the report of the Medical Officer of Health of Handsworth apply so generally to developing urban districts that I quote them in full :—
 “ In connection with the subject of new streets and new buildings, there are several matters worthy of the careful consideration of the Council. During the year I have reported two sites to the Plans and Buildings Sub-Committee as undesirable for building purposes, and likely to lead to bad health of the persons occupying such houses. It is a deplorable fact that such sites are attractive to the maker of ground rents on account of their low price, and houses that are erected on these and other sites only just fulfil the bare requirements of the local bye-laws. Partly owing to the bad state of repair into which these houses rapidly fall, and partly owing to the special situation of some of such houses, there are now parts of the district rapidly degenerating into slums. With the present systems of road and house planning and construction this is inevitable. It is difficult to picture anything more drearily monotonous than the average new road built up with the rows of modern small houses. Hundreds of houses of

precisely the same pattern line both sides of the road. Soon after their first 'newness' is worn off they often begin to get out of repair. Voids then occur and rents are lowered to attract new tenants, and eventually the houses are inhabited by a filthy class of tenants who live under just as undesirable conditions as in the old-fashioned slum of a large town. It is obviously to the interests of the district that these 'slum-makers' should be kept out, as a large proportion of the cases of infectious diseases occur among them. Moreover, the children of such people give an infinite amount of trouble to the schools on account of their general filthiness, and it is unreasonable to force the clean children of other people to run not only the possible risk of contagion, but the more probable one of acquiring vermin by personal contact.

"Fortunately, in the case of our own district, it is not too late to apply a remedy. A large proportion still remains unbuilt upon, and there is yet time to save the reputation of Handsworth as an ideally-situated residential district. In order to do this it would be necessary to seek additional powers in the direction of town planning. Some towns have already obtained very considerable powers in this respect. Local authorities should be in the position to be able to criticise the plans of those who are about to develop estates, and such plans should be considered both from the point of view of the whole district and the neighbouring estates as well as the estate itself. The present haphazard system of development is disastrous to the public health and convenience, and is often eventually ruinous to the public purse.

"Local authorities, at present, usually have power only to harass the owners of estates about petty details of buildings instead of controlling them on general principles. Power should be obtained to restrict the number of houses per acre, and to provide for open spaces. It is only by acquiring such control that we can hope to maintain or improve upon our present enviable position as regards the death-rate and the general health. The present time is opportune, but the existing evil is spreading, and unless immediately checked it will cause a rapid deterioration in health.

“ Another matter upon which additional powers are necessary is the control of small buildings erected in the neighbourhood of existing buildings. These are a source of considerable trouble both to the Surveyor's department and the health department, and are likely to cause still more worry unless they can be controlled with greater firmness than is possible at present. It is interesting but extremely annoying to be able to trace the gradual evolution of some undesirable stable from a preliminary stage of four poles and a loose roof to its present state. Such erections should always be judged from the point of view of what they may develop into rather than their alleged immediate use.

“ Many new houses have been erected in the past where the pantry accommodation is defective. From a public health point of view it is desirable that the district should possess the necessary powers to insist upon the provision of adequate and satisfactory pantry accommodation. Other important matters are provision for the storage of coals and the reception of ashes. It is quite common to find houses where the inhabitants are compelled to keep the coals in the place provided for ashes, and consequently the ashes and refuse get scattered about the premises.”

The Medical Officer of Health of Heath Town comments very fully upon the question of housing, and points out how essential it is, both on moral and on sanitary grounds, that a determined effort shall be made to improve existing dilapidated property and to insure that in the future development of the district past mistakes may be avoided. A very interesting experiment is about to be tried in this district, and the scheme is outlined in the report, as follows :—“ There is one movement which is full of promise, and to which I look forward with the greatest hope for the general and sanitary improvement of the district, and that is the proposed ‘ garden suburb.’

“ The ‘ garden city ’ movement has always seemed to me to be the true solution of the industrial and sanitary questions of the future, though I was afraid it was somewhat Utopian. The success of Letchworth has eliminated that fear, however, and for the past two years I have been hoping that something of the same nature might have been realised in your district,

little thinking how soon it was to come to pass. Last year I urged the planting of trees as a preliminary measure in the æsthetic and sanitary uplifting of your district. But now we have a plan on an elaborate scale for the laying out on a large scale of the conditions that have proved so successful at Letchworth. The genesis of the idea is due, I believe, to Mr. Arthur Paget, the son of the Right Hon. Sir Richard Paget, Bart., who has readily fallen in with his son's ideas. The Honourable Baronet is the owner of a large tract of land on the north-east side of the district, and the adjacent land in the Parish of Bushbury. It is proposed to lay out this land on the same general lines as that at Letchworth, and Mr. Thomas Adams, the late Secretary and Manager of that enterprise is acting as Resident Agent. In the latter case, however, the population was imported from a distance, but in this case the bulk of the population will probably be derived from other parts of Heath Town, and from the neighbouring town of Wolverhampton, so that the term 'garden suburb' is more appropriate to the new venture. It is a matter of congratulation that your district is to be the seat of the first experiment of this nature.

"The land is situated at the pleasantest and most rural part of your district, at an altitude of 450 to 520 feet above sea level, well above the adjoining country to the west, and over a large portion, extensive views to the Cleve Hills and Central Wales Highlands can be obtained, while in other directions the land is more level. It is pleasantly wooded in parts, and has at present very few houses upon it. It comprises the land to the east of Park Lane and to the north of Thorneycroft Lane and the portions of Cannock and Prestwood Roads that are in a line with Thorneycroft Lane. On this land it is proposed to erect dwellings of various grades, but all having that element of æsthetic appearance and diversity of design associated with the model villages at Bournville and Port Sunlight, and with the ideas of the promoters of the garden city and garden suburb movement. It is hoped that cottages may be built at about 4s. a week, which will attract many of those who have hitherto lived in slum property, which has brought in less rent, but that with the added income that work in the gardens would produce, and the far better equip-

ment and capacity for work that the new conditions would entail they might easily afford the extra rent. There is also the class of houses above the grade of slum house, the long rows of houses that have been recently built in Park Village and other parts, where each house is fairly roomy and sanitary, but when it forms but a unit among scores of other houses of exactly the same design, the whole effect is one of dreary monotony which cannot but have an ill effect upon the most unæsthetic natures. And they are not as a rule well built, and will eventually degenerate into slum houses. In the new estate it is proposed to build many houses of similar capacity to these, but detached or in small groups, and with a large garden space, and of an ornate and varied design.

“The whole of your portion of the estate will be capable of being drained into your sewers, and gas and water mains are laid on to the property. The Wolverhampton Corporation have powers to run electric trams along the Cannock Road as far as the Grand Junction Bridge, and the promoters hope to have the cars running soon, and to secure an extension to the new suburb. This will no doubt secure the migration of many of the workers in the factories in Wolverhampton to the new suburb, and possibly even new industries might be set up.”

The Medical Officer of Health of the Borough of Newcastle-under-Lyme writes :—“During the last five years a great improvement has been brought about by the closing and demolition of houses unfit for human habitation. The great improvement in the Lower-green area being most marked, and I hope for a similar improvement in the Holborn; the old houses there previously condemned are now being pulled down. Some old property on the Upper-green has been practically re-built, and though no houses have been closed during the year, yet some marked improvements have been made. There still remains some other houses to be closed—these will be taken in due course.”

The Medical Officer of Health of Quarry Bank writes :—“Owing to the number of houses owned by poor people, whose resources have been drained by damages from mining operations in the past, it is impossible to get anything like sweeping reforms in house repairs in such cases, without

inflicting the greatest hardships ; but there are also very many houses owned by wealthy persons, not residing in the district, whose estates are managed by local agents, and with these no such question as hardship arises ; and it is the obvious and bounden duty of the Council to secure for the poor people, who are compelled to live in these houses, such a measure of sanitation as the law permits and expects. Whilst admitting the influence of the environment on the tenants, the influence of the tenant on the environment may be even greater, and a law that would ensure cleanliness, both of person and habitation, would tend to a better understanding between tenant and landlord. As no such law is ever likely to be enacted in England, the doctrine of cleanliness should be inculcated on every occasion : in the schools, in the pulpit, and in the Press—and what cannot be achieved by compulsion may finally yield to suasion and strategy.”

In referring to deaths from phthisis in Sedgley, the Medical Officer of Health writes as follows regarding one of the predisposing causes :—“ Overcrowding and damp houses predispose to phthisis, and we still have too many houses without eaves-spouting. During the last year this defect has been remedied to some extent by your Surveyor (Mr. Turton), and the printed notices posted to each houseowner helped greatly to hasten on this essential check to disease. Doubtless, during 1907 your Surveyor will insist upon owners complying with the notices issued by him. It is satisfactory to note that your Sanitary Inspector (Mr. Wane), in whose report this subject is dealt with, has succeeded in getting eaves-spouting provided to 237 houses during the year. If this Council will continue its present policy of dealing with dilapidated, damp, and insanitary dwellings, a check to the spread of phthisis will have been offered.”

The Medical Officer of Health of the Borough of Tamworth, in summarising the questions which are of most pressing importance in the Borough at present, says :—“ The provision of much-needed additional house accommodation for persons of the working classes by exercise of the powers conferred by the Housing of the Working Classes Acts. The establishment of a municipal common lodging-house is also a

matter deserving of attention, and, indeed, appears to be urgently needed."

EXCREMENT AND REFUSE DISPOSAL.

I have called attention in my preliminary remarks to the satisfactory advance which has taken place in the system of dealing with the excrement and refuse of many districts. This subject has received considerable attention in my previous reports, but as it is one of such supreme importance from a health point of view, I propose to notice, very fully, the paragraphs in the reports under review which deal with it.

With reference to the new sewerage and sewage disposal scheme which is now approaching completion at Bilston, the Medical Officer of Health writes :—" Difficulties will no doubt occur in connection with the conversion of privies to water-closets—a most necessary improvement—and seeing that it is doubtful what powers at present exist for the making of a general order for such conversions, I am of opinion that the time is ripe for application for compulsory powers in this respect.

" The provision of a dust-destructor is still under consideration, and is very much needed."

With reference to the question of refuse disposal, the Medical Officer of Health of Brierley Hill writes :—" Although this work is still done by contract, it is satisfactory to note that the present contractors continue to give general satisfaction, and I am now very rarely asked to attend to any complaint from that source.

" The most important question, which requires your attention, is how to dispose of this refuse? The tipping system is universally condemned, and is getting especially difficult in your district. I do not think any part of the land which lies between the Town Hall, Cottage Street, Mill Street, and the canal should be used for a tip. It is much too near the town. Mr. Yorke drew particular attention to this tip in his last annual report.

“As the time for renewing the contract is drawing near, I hope you will be able to give this question your careful consideration, with a view to adopting some better arrangement.”

From the report of the Sanitary Inspector of the Borough of Burslem, which is embodied in the report of the Medical Officer of Health, I quote the following:—“The nuisances arising from choked and defective waste water-closets continue to be excessive, and considerably over 600 of these have occurred during the year, many of which have been put right by the Corporation workmen with their pumps, &c., without troubling the owners. The others have had attention by the owners after notices have been sent. . . .

“The old privy cesspools, which were so common several years ago, are fast giving way to the water-carriage system, and I am hoping that the day is not far distant when they will be a thing of the past. . . .

“The work of removing ashes and night-soil has been well carried out during the year under the supervision of my assistant, and, although the teams in number are the same as seven years ago, the refuse in bulk is much greater, and the multiplying of ashbins in the borough, which is very desirable in the place of ashpits, makes the work more complex and difficult; yet second complaints have been the exception rather than the rule.”

As regards excrement and refuse disposal at Coseley, the Medical Officer of Health writes:—“This is carried out by the Council’s own workmen, under a superintendent. The work is done much better than formerly, but a larger staff is required. Under the more thorough system of cleansing privies now in force, it is found that in many instances only part of the contents were removed in years gone by. Large and open ashpits and dilapidated leaking closets are still numerous, and their entire abolition should be aimed at. One hundred and seventy-seven privies and ashpits have been re-constructed during the year.”

The Medical Officer of Health of Darlaston, where the privy midden system in its worst form largely prevails, writes:—

“ It is difficult to overestimate the importance of this subject : it has so direct an influence upon our statistics that in proportion as the question is considered or ignored depends to a great extent the decrease or increase of our general and infantile death-rates.

“ Year by year it is with pleasure that I am able to record the accomplishment of good and useful work, but much still remains to be done.

“ While the adoption of the water-carriage system in the case of all new building has for some years been made compulsory, there is need for further effort in dealing with the obsolete type of privy which so largely predominates in the old property of this district.”

I quote the following as an example of good work which is being done at Fenton :—“ I notice in the course of my inspections that much has been done to improve the sanitary conditions of the more congested *groups* of old property (the amount is nowhere sufficient to warrant the term *areas*) by the substitution of portable covered zinc bins and water-closets for the original open ashpits and privies.”

With reference to the final disposal of the refuse, the same Medical Officer of Health writes :—“ All butchers’ and fishmongers’ refuse has been regularly removed and burnt in the Longton destructor.

“ There are six tips in the district for the disposal of ashes. Printed notices are posted on premises warning occupiers not to throw vegetable matter into their ashpits or bins. These are usually disregarded.

“ The question of providing a destructor of our own is being considered, and a site has already been selected. Although refuse destructors do not seem to be much in fashion in this part of the world, they are really very necessary in rapidly growing districts. The presence of tips in an up-to-date town like Fenton can only be regarded as an anachronism.”

In Handsworth, it would appear that the policy of substituting the water-carriage for the conservancy system,

adopted some years ago, has made fairly satisfactory progress during the year.

The Medical Officer of Health of Heath Town writes :—
 “ The conservancy system generally prevails. There are a few water-closets and many slop-closets. One or other type is insisted upon in the case of all new houses. Until a few years ago, most of the closets were of two types : large middens opening into a large ashpit, and exposed to the weather, and privies with large underground vaults, capable of holding the excretions of a family for a year. Up to September of 1904, as a result of the energy of your late Medical Officer and of your Inspector, they were reduced to about two dozens. Your Council has taken action, and as a result all the former type have been converted into the ‘ ash closet ’ type, the privy described in the bye-laws, of limited capacity, with an opening at one side, with a concreted floor, into which the household ashes are put, the ashpits being abolished. There are still a few privies with large underground vaults left.

“ The usual practice of emptying has been to place contents in a wheelbarrow and tip it on the streets. After a large number of closets are emptied in this manner, the cart comes round, and the night-soil on the streets is shovelled in. The carts, being of the ordinary contractor’s type, leak and further besmire the streets on their way to the tip. The streets are thus fouled, the night-soil sinks into the macadam, and in the case of infected stools, becomes a menace for years afterwards.

“ When there is a heavy rainfall upon a series of these street tips waiting for the cart to come round, the contents of the storm sewers will be anything but desirable. The whole practice is very reprehensible, and I dealt with the matter fully in my report for 1904, and the County Medical Officer of Health made it the subject of a special report. He advocated the use of a galvanized iron tub, suspended by pivots on a forked arm, fixed upon wheels, of such a size that will permit two men to lift it when full and tip it into the cart direct.

“ He also advocated that the Council should attempt to secure the conversion of existing privies into water-closets by

making substantial grants towards the substitution. For the arguments advanced, I must refer you to his memoranda, printed in that year's report on pp. 13, 14. I advocated strongly the adoption of both measures, but your Council could not entertain the idea of subsidising the substitution of water-closets, though it favoured the notion of the use of the pail suspended on wheels as the intermediary between privy and cart. I also advocated the use of tumbler water-tight carts, and believed that the difficulty of tipping could easily be got over. Your Council appointed a sub-committee to consider the matter, but beyond this no further steps have been taken. The only additional working cost would be the provision of an extra cart (with man and horse), for use while the first cart was on its way to the tip and back."

With reference to the above quotation, I would point out that the effort of the District Council to mitigate the privy nuisance as far as possible by curtailing the size of the receptacle is entirely annulled by the dangerous and unwholesome system of removing the privy contents.

In the Borough of Newcastle it would appear that good work is being done in improving the system of refuse disposal. There are now 763 ashbins in use in the borough, the previous number having been increased by 171 during the year, and in all such cases there is weekly removal.

In referring to the causation of epidemic diarrhœa, the Medical Officer of Health of Quarry Bank writes :—" I have in all my recent annual reports dilated upon the importance of abolishing large privy middens, and of removing refuse from the vicinity of dwelling-houses. Some degree of progress is being made, but these conditions are so prevalent that at the present rate it will be many years before a substantial reduction is effected."

Later on, in the same report, the following appears :—" The principal feature of this year's draining operations has been the laying of the deep sewer in Mount Pleasant, which should give property owners an opportunity to fix w.c.'s in place of the present privies. The property owners throughout the district have not taken up this matter to the

extent that was anticipated, and the privy midden, with all its attendant nuisances, is still predominant. In the case of new property, and where in old property sanitary conveniences are being re-constructed, water-closets should be, and I believe generally are, insisted on. But there is urgent need of a more wholesale condemnation of the present dilapidated privy middens, which constitute by far the most insanitary features of your district. With proper w.c.'s in use the work of scavenging would be much reduced, and therefore much less expensive. Large covered metal bins, to receive house refuse and ashes, to be emptied weekly, should be used wherever practicable in place of ashpits; but owing to the amount of ash from the common coal and the large fires used by the poor these would generally be of insufficient capacity."

The Medical Officer of Health of Rowley Regis writes :—
 "The provision of water-closets is compulsory in all new houses where water supply and drainage facilities are available. The old privies and privy middens are being steadily replaced by water-closets whenever opportunity arises. During the last year one hundred and twenty-nine midden closets were converted into water-closets and eighty-six new houses were constructed with water-closets. . . .

"The bin system is gradually gaining favour, and so far has proved satisfactory. The old ashpits, when large quantities of ashes and refuse are allowed to accumulate, are very objectionable, and are a very possible source of danger to health."

In view of the progress which is being made in the abolition of privy middens and the substitution of ash bins and water-closets in most of the urban districts in the county, it is depressing to find that the District Council of Sedgley seem to be satisfied with the old order of things, as would appear from the following extract from the report of their Medical Officer of Health :—"The privy system is general throughout the district, the structures providing for the mixture of excreta and house refuse. The excreta mixed with fine ashes are carted to various farms in the district and used for agricultural purposes. The rough coarse refuse is tipped at various

suitable places in the district. This work is carried out by the Council's workmen, hired teams being employed. The frequency of removal of excreta and house refuse varies from one to six months."

Equally disappointing is the following extract from the report of the Medical Officer of Health of Short Heath :—
 "In my last annual report, and in many others, I advised that every ashpit should be made water-tight, above and below, as quickly as possible ; yet I had occasion in June to call attention to a breach of this rule in newly-erected property in New Street, Lane Head."

The Medical Officer of Health of the Borough of Stoke-on-Trent writes :—"A large number of water-closets in the borough are without flushing cisterns. In several instances the water-supply to the houses is deficient, and this deficiency is much increased where there are water-closets without flushing cisterns.

"There are now in the borough 5,210 water-closets with and without flush, about 250 slop water-closets, 1,822 cesspit-closets, 632 open ashpits, 3,137 covered ashpits, and 3,520 ashbins.

"In 1906 there were 96 cesspit-closets converted into water-closets.

"It is satisfactory to note that all new houses are now supplied with ashbins ; there are over 3,500 in the borough, and these are emptied once weekly, and in some cases more frequently. There are also 300 shops in the main streets where there is a daily collection of refuse."

With reference to the above quotation, I would point out that so-called water-closets without water cisterns are most unwholesome appliances, which should not be permitted to exist.

It would appear that the Tettenhall District Council are now considering the question of improved methods of excrement and refuse disposal.

The Medical Officer of Health of Tipton writes :—"In course of time, when the deep sewerage scheme has become

more general, we hope that the use of water-closets will supplant the present insanitary and unsightly privy cesspit accommodation which holds, as a rule, in the district. The ashpits, as at present arranged, are often dangerously near the houses, serving, as they do, as a receptacle, not only for ashes, but for all kinds of organic refuse, the proper place for which is on the fire, and not to be thrown out to decompose and pollute the atmosphere surrounding the ashpits. This condition can be easily remedied by the use of galvanized iron bins of sufficient size to hold the refuse of three days, and then to be removed by the scavengers."

The Medical Officer of Health of Tunstall writes:—" I should like to see adopted an universal system of galvanized dust bins and placed under cover. At present wooden bins are principally used, and as they are exposed openly to the weather very quickly fall to pieces, with the result that yards are frequently weeks without any receptacle whatever. The existence of ashpits whenever possible should be terminated, since their presence involves emptying ashes, &c., into the street, a practice, which, it is needless to say, is most objectionable and insanitary.

" Continued progress is again in evidence with regard to the abolition of the privy system, no fewer than 76 having been converted to water-closets."

The Medical Officer of Health of Tutbury Rural District writes under this heading:—" This important branch of sanitation has received much consideration during the past year, and much useful work has been done in carrying out the regulations of the Council for the cleansing of ashpits and privies in the various parishes in the district. A public scavenger has been appointed to cleanse the ashpits, &c., in the Parish of Outwoods, and the Council are to be congratulated on this important step. Much improvement is noticeable at Barton and Stretton in this respect, as a result of the increased efforts upon the part of the majority of the occupiers to cleanse their privies and ashpits in the endeavour to avoid an increase in the rates, which would result on the work being undertaken by the Council. In many instances the owners have undertaken the work, with gratifying results."

SEWERAGE AND SEWAGE DISPOSAL.

Apart from the information already in the Council's possession as to general activity on the part of most authorities in improving the various sewerage systems, it is evident, from the prominence given to the subject in most of the reports, that honest, although, perhaps, somewhat tardy efforts are being made to meet the views of the Council. The following summary of the remarks under this heading will serve to show that this is the case :—

The Medical Officer of Health of Biddulph writes :—“ Delay has again been caused to the new scheme. A commencement has, however, been made to divert the footpath which has been both literally and figuratively blocking the way ; and I can only again express the hope (so often disappointed) that I may have a better report next time.”

The Medical Officer of Health of the Borough of Longton writes :—“ I must again bring before your notice the re-sewering of Dresden, the necessity of which you recognised four years ago, when you passed a resolution ordering the same to be done.”

The Medical Officer of Health of Rugeley writes :—“ The septic tanks and sewage farm are working very well, and have been periodically inspected by the Rivers Pollution Inspector and found satisfactory.”

The Medical Officer of Health of Stone Urban District writes :—“ The sewage works remain in the same condition, and in the warm summer weather were certainly a nuisance to some of the houses in the neighbourhood. I have not heard that the experiments as to the use of oxychlorides which were to be carried out at Guildford have yet been reported to the Local Government Board. Some early steps will, I hope, be taken to come to some decision as to whether suitable precipitation and septic tank purification can take place on the present site.”

The following paragraph in the report of the Medical Officer of Health of the Borough of Tamworth has reference to a matter which might well receive the attention of other authorities in whose districts sluggish streams are artificially held

back by weirs :—" Negotiations for the purchase of the Comberford weir, as part of a general scheme for the removal of the weirs on the rivers Anker and Tame, had been in progress for some time. Application having been made to the Local Government Board for sanction to borrow £120 towards the cost of the purchase and removal of this weir, a public inquiry was held on June 12th, 1906, and sanction to borrow the money having been subsequently obtained, the purchase was completed on November 19th, 1906."

I gather that this undertaking is being carried out jointly with the Tamworth Rural District Council.

The Medical Officer of Health of Uttoxeter Urban District writes :—" The new sewerage outfall works have been in operation throughout the whole year, and have worked in a very satisfactory manner."

" The connecting of house drains to the new sewers has been proceeded with, and 440 sets of premises have been connected, making the total 514 sets of premises actually connected with the new sewers, 264 of the premises having been completely re-drained since the work was commenced."

I quote the remarks of the Medical Officer of Health of Cannock Rural District practically *in extenso*, as showing the large amount of good work done, or being done, in providing schemes for populous centres throughout the district :—

As regards Cheslyn Hay, " The Council have provisionally approved of Mr. Whitehead's scheme. The Council did this as there are properties in the parish which can be drained into either the Saredon Road or the Littlewood outfall works, and they wish to ascertain definitely to which works it will be most economical to drain these properties. They have instructed their Engineer to prepare a general plan of the drainage of the parish, and this he has promised in time for consideration at the February meeting of the Council.

" The Brewood sewerage works continue to work satisfactorily. During the past year they have been inspected by Major Norton, of the Local Government Board ; W. G. Tynedale, of the War Office ; the County Medical Officer of Health ;

and the Council's Brewood Sewerage Committee. All visitors have expressed themselves quite satisfied with the works, and I am pleased to render my own testimony to the excellent work done by Mr. Whitehead. The effluent is of very good quality, and a sample has been submitted to the Council by Mr. Fisher. The maker of the distributor has also been allowed to exhibit this sample effluent at Bristol. All houses within one hundred feet of the sewer have been connected. No proceedings to compel connections have been necessary.

" Application to the Local Government Board to declare the cost of the works as special expenses chargeable to the whole of the parish has brought to light the fact that an Order exists constituting a special drainage area within the parish. The Council have decided to continue with their application for the works to be special expenses chargeable upon the whole of the parish.

" The completed scheme for the sewerage of Ford Houses has worked satisfactorily throughout the year. The actual cost of the scheme was £505 10s. 7d.

" Owing to difficulties as to site it has been necessary to prepare new plans for the Bushbury (Oxley) sewerage scheme. The site has now been definitely decided upon. Mr. Whitehead's revised plans and estimates have been approved and adopted. Arrangements have been made with the Staffordshire and Worcestershire Canal Company for the discharge of the effluent into their canal at Alderley Junction. Tenders have been accepted for the works of sewage treatment and disposal, and for sewers, manholes, lampholes, etc., and the work will be shortly commenced. It has been decided to pay the cost of the sewers, etc., out of current rates, and to raise a loan for the purpose of defraying the cost of the sewage outfall and treatment works. The Local Government Board have held a local inquiry into the application by the Council for sanction to borrow £2,300 for the necessary outfall and treatment works. I attended the enquiry and approved of the scheme, which received the support of the local authorities, a scheme endorsed by the County Medical Officer of Health.

" In consequence of the lengthy negotiations with the Ashmore Park Colliery Company as to rent to be paid to them,

the scheme for the sewerage of Sneyd Lane, Essington, has been considerably delayed. Terms have now been arranged with the company. The Council have decided to purchase from Lord Barnard the site originally proposed by him, and have instructed their Engineer to press on with the preparation of plans for this sewerage scheme. The Council will use every effort to get this scheme completed as early as possible, as strong complaints are being made as to nuisance created by the sewage.

“ In view of the liability of sewers laid in Great Wyrley to disturbance by colliery subsidences, it has been decided not to proceed with the scheme for this parish at present. Arrangements have accordingly been made with Mr. Harvey to allow the sewage tank at present in existence to remain until such time as a proper scheme is feasible.

“ Landywood (Upper and Lower) constitutes a considerable portion of the parish of Great Wyrley. The Engineer prepared and submitted a scheme for the drainage of Upper Landywood at an estimated cost of £450. The Council considered that the drainage of Lower Landywood and Street's Lane might be included in this scheme, and instructed the Engineer to revise the plans accordingly. The Engineer prepared a provisional scheme at an estimated cost of £1,600. The liability of part of the district proposed to be drained to subsidences by colliery operations was carefully considered, and Mr. Whitehead was instructed to further consider his scheme in view of this fact. Subsequently, Mr. Whitehead prepared another scheme for the sewerage of Upper and Lower Landywood at an estimated cost of £2,000. This scheme has been approved. The Council have made application to the Local Government Board to allow the appropriation of Wyrley parish property proceeds to defray the cost of the scheme. The plans are to be submitted to the Local Government Board for approval. The County Education Committee propose to erect a new school in Holly Lane, Wyrley. This will necessitate the extension of the sewer, and the County Committee have notified their willingness to pay half the cost of the necessary extension.”

The Medical Officer of Health of Kingswinford Rural District writes :—"The sewerage works within the district are now practically completed, but the matter has been delayed by reason of negotiations with the Brierley Hill Urban District Council for dealing with their sewage on this Council's farm at Round Hill, the works on which are quite completed. The two pumping stations and engineers' cottages are also completed, and the final completion of the scheme is now only awaiting the sanction of the Local Government Board to the communication of the sewers between the two districts. An additional loan will be required for this purpose, and the Local Government Board have intimated that at the earliest possible moment they will hold the usual enquiry before sanctioning the same."

The Medical Officer of Health of Lichfield Rural District calls attention to the satisfactory working of the recently completed sewerage and sewage disposal scheme for Chase Terrace, and he states that the proposed scheme for Shenstone has been approved by the Local Government Board.

The Medical Officer of Health of Newcastle-under-Lyme Rural District writes :—"The whole of the houses at Madeley Heath, Little Madeley, Middle Madeley, and Madeley, are now connected to the main sewers, and the sewage is being treated at the outfall works, which are in full working order, and appear to be producing a satisfactory effluent."

The Medical Officer of Health of Walsall Rural District points out that a sewerage and sewage disposal scheme for Streetley, a growing residential area, is now under consideration.

WATER-SUPPLY.

The following is a summary of the remarks with reference to water-supply in those districts where the subject receives most notice in the reports. The Sanitary Committee of the County Council have frequently had occasion to spur on Authorities in districts where good public supplies are available, but where many old local wells, liable to pollution, are in use.

It is satisfactory to find that the water-supply of Brown-hills, concerning which the County Council had occasion some time ago to make a representation to the District Council, is now almost wholly obtained from the mains of the South Staffordshire Waterworks Company.

The Medical Officer of Health of Coseley writes :—“ Twenty-six houses (apart from new houses) have been connected with the public water-supply during the year, and the work of improving the supply which has extended over very many years is now nearly complete. The few houses now remaining without ‘ tap ’ water will not be lost sight of, and the owners will be required to attend to the matter.”

The following extract from the report of the Medical Officer of Health of Fenton indicates what authorities have to contend with in some districts :—“ Our Sanitary Inspector informs me that the deficiency in Terrace Buildings was reported by him two years ago, and on an extra tap being supplied, the pipe was promptly beaten up, and the tap stolen ! ”

The Medical Officer of Health of the City of Lichfield writes :—“ During the hot weather, and probably owing to the sinking of shafts by the South Staffordshire Waterworks, many of the wells have run dry, and there has been in consequence a lamentable want of water for all purposes in some districts. The extension of the Conduit Lands supply, which your Council is endeavouring to procure, will prove a great benefit, and will improve the sanitary condition of these districts very considerably.”

Under the heading “ Enteric Fever,” the Medical Officer of Health of Sedgley writes :—“ There are now only a few wells in your district used for drinking water, and I have no doubt that the dry seasons during the past three or four years to some extent have lessened the number of cases of typhoid. Considerable progress has been made during the past year by your Surveyor (Mr. Turton) in extending the public water-supply wherever it is available. There is no health work of so much importance as this, and every effort to remedy this primary sanitary defect must be made as

speedily as possible. We have a good public supply of water in nearly every portion of our district, and delay in using it is distinctly dangerous."

Later, in the same report, the following remarks appear :—
 " The water-supply for the hamlet at Gospel End (about 50 houses) has been improved by the provision of a pump, instead of an open well, liable to pollution, and very probably building operations here in the near future will enable the Council to arrange for the extension of the water mains. The streets where a public supply has superseded wells during 1906 are Bird Street, Barr Street, and part of Brook Street."

The Medical Officer of Health of Uttoxeter Urban District writes :—" The water-supply to the town has been greatly improved during the year, and when the contemplated alterations in the distribution have been carried out, we trust the quantity and quality of the water will prove satisfactory."

The Medical Officer of Health of Mayfield Rural District writes under this heading :—" The Water Committee have been actively engaged during the past year in endeavouring to solve this most difficult problem. Various means have been considered and tested, but none of the alternative schemes could be relied upon, and the Committee eventually fell back on the original scheme from Birdsgrove. Plans and estimates of this scheme were prepared by the Surveyor at an estimated cost of £2,500, but when submitted to the Parish Council and a Ratepayers' Meeting, the scheme met with violent opposition, and a resolution was passed requesting the District Council to endeavour to devise some less costly scheme for the supply of that portion of the village only which was in urgent need of it. Therein lies the greatest difficulty the Committee have to face—approximately half the village is at present more or less satisfactorily supplied, and if it were possible to disregard the probable requirements of seven or eight years hence, a cheaper scheme might be devised, which, with a large reserve, would survive a normal summer ; but if the scheme is required, whether now or in years to come, to provide for the whole village, there is no possible alternative to the Birdsgrove scheme. The matter is without doubt a

serious one for the township of Mayfield, but the Committee may be relied upon to do their utmost in the interests of the community."

In the same report, with reference to the village of Waterhouses, he writes :—" This matter has been before the Committee on various occasions, and a thorough inspection of the present sources of supply was made by the Inspector in July. The Council are awaiting the result of the negotiations between the Cheadle Rural District Council and the North Staffordshire Railway Co., in the hope that a joint scheme by the three bodies may be arranged. This seems to be the most satisfactory way out of the difficulty."

The Medical Officer of Health of Seisdon Rural District writes :—" It being now necessary to supply Kinver with water and drainage, I hope these will soon be accomplished facts."

The Medical Officer of Health of Stone Rural District writes under this heading :—" Negotiations are still going on with the Waterworks Co., the parishioners, and your Authority, for supplying Oulton and Rough Close with a more plentiful and purer supply. May I suggest the possibility of obtaining water from Moddershall (where there is a plentiful supply), and pumping it up to Meir Heath, whence it could supply Rough Close and Oulton also. By order of your Authority several of the wells at Oulton have been cleaned out and repaired with a beneficial effect."

The Medical Officer of Health of Tamworth Rural District writes :—" With regard to the procuring of a supply of water for parts of the parishes of Croxall and Edingale, it will be remembered that two wells have been sunk, one near the Holly Bush Inn, and the other near the School, and that the Committee appointed to deal with this matter were of opinion that another well was needed in a more central position between the two already sunk. A resolution was passed by your Council urging upon the owners the necessity for constructing this additional well, and in the reply received an undertaking was given to complete the work. The matter has not been allowed to drop, and further correspondence has

taken place with a view to the completion of the work and the provision of a sufficient supply for the wants of the village."

SLAUGHTER-HOUSES AND MEAT INSPECTION.

Most of the reports refer to the inspection of slaughter-houses, and, as a rule, they are said to be in a fairly satisfactory state. I am afraid, however, that the standard is not a very high one, and that the favourable comments have reference more to the condition as to cleanliness than to structural fitness in many cases.

The Coseley Urban District Council are to be congratulated upon their success in proceedings taken against a butcher, as recorded in the report of their Medical Officer of Health, as follows :—"During the year your Council undertook an important prosecution against a butcher in a large way of business, and who was systematically in the habit of purchasing very inferior animals at distant markets.

"Owing to a misapprehension arising as to the sanitary district in which the slaughter-house was situate, valuable information regarding his doings did not reach us promptly enough to be of service ; but on March 29th, the Inspector seized four quarters of tubercular beef.

"The prosecution resulted in the defendant being fined £42 and costs, total £66 6s., forty shillings of the fine being for obstructing the Inspector."

The Medical Officer of Health of Rowley Regis writes :—"Proceedings, which resulted in a fine of £10, were taken against a butcher at Old Hill, on October 19th, for having in his possession for sale the carcase of an unsound and diseased cow."

The Medical Officer of Health of the Borough of Stafford records a conviction, with a £5 fine, in the case of a butcher who had exposed unsound meat for sale.

The Medical Officer of Health of Tipton writes :—"Much of the meat sold is very poor and not nutritious ; this is particularly the case in the Great Bridge market on Saturday evening. Many times carcasses, much wasted and devoid of

fat, have been inspected by me, but I could trace no signs of tubercle. In one instance four quarters of beef, evidently tubercular, were seized by the Sanitary Inspector and condemned by me, the butcher being summoned and fined by the magistrates. The Sanitary Inspector and myself have made many inspections and visits, but there is great difficulty in obtaining a sufficiently clear and definite certainty that the meat seized is anything more than not nutritious, unless there is some palpable sign of tubercle, this is usually impossible, as all traces of tubercular disease are usually removed by the butcher before our visit."

In this district the Authority do not now register slaughter-houses, but grant licences, which have to be renewed annually.

The Medical Officer of Health of Wednesfield writes with reference to proceedings for selling unwholesome meat, as follows :—" Two cases of this description, both coming from the same place, were adjudicated upon by the Magistrates, and in the one a conviction was secured.

" In consequence of the insanitary condition of the slaughter-house, and in view of the fact that poor and diseased meat is sent from thence, I would strongly recommend the Council to take steps to cancel the licence."

DAIRIES, COWSHEDS, AND MILKSHOPS.

The work under the Dairies, Cowsheds, and Milkshops Order receives attention in most of the reports.

In view of the reports of the Royal Commission on Tuberculosis, the question of the milk supply, the importance of which has long been recognised by health officers, has come prominently to the front, and some means must be found of effecting a radical change in the present methods of production and distribution of milk in this county. Apart from the question of tuberculosis, it is an undoubted fact that milk, which should be the cleanest article of food consumed, is at present the dirtiest. There is no reason why this should be the case, but reform means increased cost of production, and if the public are to be supplied with a wholesome clean article they must be prepared to pay a higher price for it.

The Medical Officer of Health of Brierley Hill, in the section of his report dealing with the causation of epidemic diarrhoea, suggests that the institution of milk depôts would afford babies a much better chance.

The Medical Officer of Health of the Borough of Longton writes :—" Some radical action will certainly have to be taken in connection with the cowsheds, as they continue to be overcrowded, ill-lighted, and ill-ventilated, and some of them are badly constructed. It is difficult to persuade some of the farmers that cows require fresh air and cleanliness as much as other animals do, but the farmers of this district are not peculiar in this respect, as it is a well-known fact that all over the country, with a few exceptions here and there, the cows and cowsheds are not kept in a hygienic manner, especially in the winter months. The popular idea is that unless the cows are kept very warm they will not give a good supply of milk. Of course the danger of the overcrowding, bad lighting, and bad ventilation, combined with dirt, is that tuberculosis is much more rife amongst cows than it would be if they were properly cared for, and consequently the farmers really suffer more loss from this disease than they would, presuming the cows did not give so much milk because they were not kept quite so warm. Therefore it follows that in the interest of the farmers themselves it would pay them better if they would only look at the sanitary improvements we would like to institute from this point of view."

In Blore Heath and Cannock Rural Districts regulations have been adopted, which come into force in 1907.

The Medical Officer of Health of Cheadle Rural District writes :—" Referring to the keeping of cows, a good many of the cowsheds in the district are not sufficiently ventilated, which is no doubt a fruitful source of the spread of such diseases as tuberculosis among the animals. Although ventilators are provided in some form or other, they are only too often stuffed up with straw with the object of keeping up the temperature of the building."

The Medical Officer of Health of Tutbury Rural District writes :—" The milk supply of the district has received

special attention during the year, particularly the smaller dairies which retail milk locally.

“ Arrangements were completed late in the year for submitting samples to Professor Leith, of Birmingham University, for examination for tubercle bacilli, three samples being sent up to be tested. The result showed that living tubercle were present in each sample. The Council thereupon instructed a local Veterinary Surgeon to inspect three dairies with a view to the detection of the infected animals, this was successfully done and the necessary steps taken to prohibit the use of the milk from the diseased cows—one in each dairy.”

The following quotation from the report of the Medical Officer of Health of Uttoxeter Rural District is disappointing, especially at the present time, when most of the Authorities, who hitherto have been somewhat lax in this respect, are beginning to realize their responsibilities :—“ Model bye-laws have been submitted by the Local Government Board for your consideration, and I have submitted two reports pointing out the desirability of adopting some of these bye-laws. Your Council decided not to adopt them at present.”

CANAL BOATS.

In a few instances only does the question of canal-boat inspection receive notice in the reports under review, and in none of these are there any remarks which call for special attention.

LODGING-HOUSES.

The remarks under this heading in the reports do not call for special notice.

BAKEHOUSES.

Most of the reports mention the fact that the bakehouses are regularly inspected, but few contain any observations under this heading which call for special notice.

As regards underground bakehouses, apparently there are very few in any of the districts of the Administrative County.

FACTORIES AND WORKSHOPS.

Hitherto, this question has not received much notice in the annual reports of Medical Officers of Health, but since the new Factory Act came into operation, in January, 1902, considerable space has been devoted to the subject, the result of numerous inspections which have been made, in most districts, under the Act. As time goes on, it will no doubt be found that the work will grow, and it behoves Authorities to consider whether the existing staffs in some of the larger urban districts are adequate under the new order of things. It is impossible to summarise at all fully the work which has been done in this department during the year.

The Medical Officer of Health of Heath Town writes :—
“ Last year I made a systematic inspection of all the factories and workshops in the district. This year I did not consider this necessary, but I have inspected several of those that were faulty in their sanitary arrangements last year, and I regret to say that so far none of the desired alterations have been carried out, though one of the firms have promised to put in a trough closet.”

The Medical Officer of Health of Rowley Regis writes :—
“ Very few of the manufacturers supply the lists of out-workers as required by the Act of Parliament, in spite of repeated warnings from the Council. Notices have again been sent to them, consequently ignorance of their obligations can no longer be an excuse for their negligence.”

The Medical Officer of Health of Rugeley also writes :—
“ I would remark with regard to Table 3 on the Home Office Form 573, that the number of out-workers there entered have been discovered by me, and that no lists from any source have been received by me during the year, so that I cannot vouch for the correctness of the numbers there given.”

The Medical Officer of Health of Short Heath also directs attention to the neglect of manufacturers in sending notices of out-workers.

The Medical Officer of Health of the Borough of Stafford states that the number of out-workers becomes smaller every

year, and that only old men and a few who may be engaged in special work are now employed in their own homes.

The Medical Officer of Health of Willenhall writes :—
“ Previous to October, no out-workers’ list had been received from employers. On receipt of a circular from the Home Office, dated October 4th, I drew up a printed notice, a copy of which is attached, and directed one should be sent by post to each of the proprietors of 90 factories and to all workshop occupiers on the register. In response to this notice, 14 out-workers’ lists referring to the employment of 51 out-workers in the lock trade have been received once. These lists should be sent in twice each year, in February and August, and it is the duty of the Council to see that they are sent in and examined.”

MORTUARIES.

The question of providing mortuaries does not appear to receive that attention in the reports which its importance deserves, considering the inadequate provision which, so far has been made throughout the county. One does not like to see in accounts of inquests in the daily press severe comments by coroners upon the absence of such provision.

The Medical Officer of Health of Cannock Urban District writes :—“ The provision of a mortuary is desirable in the interests of sanitation. *Post mortem* work carried out in homes is often awkward to the operator and attended with insanitary conditions.”

OFFENSIVE TRADES.

This question does not receive very prominent notice in many of the reports.

The Medical Officer of Health of Heath Town writes :—
“ The gut-scraping business continues. Though the proprietors assert that only cleaning is carried on at the premises, and this has been their only occupation when we have inspected the premises. The fact remains that several times late at night the neighbours have perceived the same terrible stench they had smelt before, when the scraping was carried on openly. Whether this is due to illicit scraping or not, it is

prejudicial to the health of the surrounding inhabitants, and I have repeatedly advised your Council to resume the proceedings you took against them, which you withdrew when the proprietors undertook to evacuate the premises in June of 1905, which promise they have failed to carry out."

It is difficult to understand why this District Council disregards the advice of their Medical Officer in this matter. I happen to have inspected the premises in question, and I am most decidedly of opinion that, no matter how the business is conducted, it should not be allowed to be carried on in the locality where the premises are situated.

BYE-LAWS.

In a good many districts in the Administrative County either no Bye-laws have been adopted or those in force are out of date. It is most desirable that Bye-laws in accordance with modern ideas should be in force in all districts.

The Medical Officer of Health of Brierley Hill calls attention to the recommendation of the Sanitary Inspector of the district regarding the need for revising the Bye-laws, as follows :—" You will observe also that Mr. Yorke again draws attention to the advisability of revising your Bye-laws, especially with regard to the difficulty in getting drains properly laid and connected. The Bye-laws cannot be too stringent over such an important matter. There is even need for it in smaller matters, such as the connection from sinks and the method of disconnection, which seem to vary according to the fancy of the builder."

The Medical Officer of Health of Fenton writes :—" The Bye-laws on the subjects of dairies, cowsheds, and milkshops are antiquated, and need amendment. Amendments are also needed in the Bye-laws as regards slaughter-houses. Bye-laws are required on the subject of houses let in lodgings and rules should be drawn up on the subject of the new mortuary."

The Medical Officer of Health of the Borough of Lichfield states that new regulations concerning dairies and cowsheds have been adopted, which he predicts will lead to good results if strictly enforced.

The Medical Officer of Health of Sedgley writes :—" I understand that during 1907 the drafting of Bye-laws suitable for this district is at last to be taken in hand. Had we a Bye-law as to the paving of backyards it would be easier to remedy such defects than at present, when we have to prove the existence of a nuisance. The soil of backyards laden with impurities is a frequent cause of illness, especially in children. A Bye-law compelling owners to have a certificate of fitness of new houses before occupation is much needed ; also one to regulate the keeping of animals. A Bye-law which would locate the privy and ashpit in new houses at a reasonable distance and distinct from the dwelling-house is also much required."

The Medical Officer of Health of the Borough of Stoke-on-Trent points out that the Bye-laws regulating slaughter-houses should be brought up to date, and states that " under the present Bye-laws dogs may be kept in the slaughter-houses. The slaughter-houses may be used as stables, and the boundaries of the slaughter-houses need not be defined."

The same Medical Officer also points out that the Bye-laws in respect of the ventilation of drains are not enforced.

The Medical Officer of Health of Stone Urban District states that new regulations under the Dairies, Cowsheds, and Milkshops Order have been adopted, and will come into operation in September, 1907.

The Corporation of Tamworth, it would appear, have submitted revised Bye-laws to the Local Government Board, but they have not yet been finally approved.

GEO. REID,

Stafford,

October, 1907.

County Medical Officer of Health.

NOTE.—In the following tables the individual zymotic mortality is given in order to indicate readily the class of disease that has mostly contributed to the gross rate. Apart from this, no accurate deductions can be drawn from such figures for one year only.

Table showing Population, Number of Persons per Acre, Birth and Death-rates, as well as the Death-rates at all ages and among Children under 1 year, and the Death-rates from Zymotic Diseases, Phthisis, Diseases of the Respiratory Organs, &c.

URBAN.

District.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.								Premature Birth.							
	Census, 1901.	Estimated to middle of 1906.						Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Group.	Fever.				Phthisis.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Leurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Cirrhosis of Liver.
													Typhus.	Enteric.	Other Continued.								
Amblecote ..	3128	3329	5.0	26.1	16.8	126	0.90	0.60	..	0.30	0.90	1.50	1.50	1.80	0.60	1.20		
Audley	13683	13800	1.7	35.6	12.1	85	1.08	0.21	..	..	0.21	0.21	0.65	0.50	0.72	1.45	0.58	0.07	0.21	0.94	
Biddulph	6247	6860	1.3	34.2	15.1	166	1.60	0.14	0.43	..	0.14	0.29	0.58	0.58	0.72	1.16	1.31	0.14	..	1.16			
Bilston	24034	24400	13.0	36.8	23.3	181	3.03	0.12	0.73	0.04	0.94	0.12	0.94	1.80	0.53	3.23	1.22	0.04	0.36	0.45			
Brierley Hill..	12042	12946	12.6	29.3	17.9	186	1.85	0.15	..	0.07	0.92	0.15	0.69	0.61	0.69	1.77	1.77	..	0.15	0.61			
Brownhills ..	15252	17126	1.9	34.8	15.1	151	2.91	0.17	0.70	0.17	1.34	0.17	0.46	0.52	0.52	0.58	1.63	..	0.23	0.81			
Burslem	38766	42294	22.7	33.8	18.6	185	3.09	0.23	0.70	0.16	0.02	0.23	0.70	1.30	0.56	1.70	0.52	0.02	0.07	0.80			
Cannock	23974	25000	3.1	36.9	15.0	121	1.60	0.76	..	..	0.76	0.76	0.72	0.96	0.76	1.64	1.28	0.04	0.16	0.88	
Coseley	22219	22250	5.6	34.7	16.0	125	1.84	0.36	..	0.31	0.36	0.36	0.76	0.94	0.49	1.57	0.89	..	0.31	0.80			
Darlaston	15395	15730	19.1	39.7	22.6	187	2.47	0.21	0.31	..	0.21	0.21	1.71	1.01	1.08	2.67	0.82	0.06	0.12	0.82			
Fenton	22742	25758	14.7	34.2	16.8	157	3.22	0.09	..	0.38	..	0.09	2.13	0.81	0.69	1.20	1.35	..	0.11	0.31			
Handsworth ..	52921	56276	18.0	22.6	11.1	120	1.56	0.07	0.04	0.07	0.07	0.07	0.90	0.60	0.84	0.58	0.70	..	0.04	0.07			

g to lb.

Deaths occurring during the year 1906, classified according to Diseases, Ages, and Localities, together with Births registered during the year.

District.	Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																													
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.	Typhus.	Fevers.		Epidemic Influenza.	Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs	Alcoholism.	Chlorosis of Liver.	Veneral Diseases	Premature Birth.	Diseases & Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.
Amblecote ..	87	56	11	2	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	..	..	5	5	6	..	..	2	..	4	6	2	2	18
Audley	492	168	42	17	10	6	60	33	..	3	..	..	..	..	..	2	9	..	..	..	1	7	5	10	10	20	8	1	1	3	..	13	21	2	2	56
Biddulph	235	104	39	10	3	4	20	28	..	1	2	..	..	1	..	..	4	1	1	1	1	4	1	5	8	9	1	1	..	..	..	9	9	5	..	38
Bilston	899	570	163	110	22	27	141	107	..	23	3	..	..	6	..	6	23	18	1	1	..	42	8	13	79	30	1	..	9	2	11	1	20	2	4	248
Brierley Hill..	380	233	71	34	15	8	60	45	..	1	2	3	..	..	..	6	9	6	..	1	9	8	7	9	23	23	..	..	2	2	8	5	14	5	1	77
Brownhills ..	596	260	90	60	13	13	45	39	..	23	3	7	..	1	..	..	8	1	1	1	..	9	3	9	10	28	..	..	4	..	14	1	12	14	..	96
Burslem	1432	790	265	95	30	30	261	109	..	7	10	2	..	9	2	2	72	3	3	3	..	55	30	24	72	22	1	30	3	3	34	4	63	28	3	267
Cannock	923	377	112	42	14	11	105	93	..	19	3	2	..	..	..	4	18	3	1	3	..	24	9	19	41	32	1	11	4	..	22	2	29	10	1	119
Coseley	773	353	97	56	8	13	98	86	..	8	3	2	..	6	..	5	17	6	1	..	2	21	12	11	35	20	..	..	7	1	18	3	28	8	5	132
Darlaston	625	356	117	48	8	12	101	70	..	2	2	..	..	3	..	14	27	8	2	..	2	16	18	17	42	13	1	1	2	1	13	5	22	15	..	125
Fenton	881	434	139	49	30	23	124	69	..	..	17	..	..	1	..	4	55	1	1	..	7	21	12	18	31	35	..	3	8	5	5	4	27	15	2	152
Handsworth...	1500	740	181	54	19	31	243	212	..	31	2	1	..	3	..	18	60	6	3	1	3	40	17	56	39	47	..	3	5	..	39	3	48	11	5	291

URBAN—continued.

District.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
								Fevers.				Diphtheria and Membranous Croup.	Scarlet Fever.	Whooping Cough.	Measles.	Smallpox.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Census, 1901.	Estimated to middle of 1906.						Typhus.	Enteric.	Other Continued.	Diarrhoea.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Heath Town...	9441	11053	15·0	36·6	12·4	108	1·71	0·09	1·26	0·36	0·90	0·72	1·26	0·78	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18	0·18

† Excluding Public Institutions.

‡ The total estimated population is 22858, but a deduction of 1536 has been made, that being the estimated number of persons in Public Institutions within the borough, but not belonging to it.

District.	Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																																		
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.	Fever.				Typhus.	Enteric.	Other Continued.	Epidemic Influenza.	Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Disease.	Cancer. Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism.	Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases & Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.
Heath Town..	44	8	9	11	40	26	..	..	..	3	1	..	..	1	..	2	14	1	..	4	6	10	8	14	..	..	2	..	9	3	6	4	..	48
Kidsgrove....	31	11	2	5	48	21	..	..	3	2	2	..	..	1	..	..	3	..	..	12	6	3	7	6	..	7	1	..	9	1	8	5	2	43
Leek	49	27	2	8	90	75	..	..	..	9	1	..	..	..	..	1	3	8	..	32	2	16	29	4	3	2	3	2	10	1	42	4	4	74
Lichfield.....	19	11	4	5	44	43	4	..	..	7	..	..	..	..	..	..	..	4	1	11	2	11	7	2	..	..	..	3	..	17	4	2	51	
Longton	314	102	29	31	249	120	6	4	8	13	2	5	..	8	144	30	2	2	4	62	15	32	100	33	26	13	4	28	2	61	26	3	220						
Newcastle....	106	37	10	10	107	90	..	4	..	3	1	1	..	3	30	16	1	1	..	22	5	19	28	21	1	16	..	1	15	4	30	6	..	132					
Perry Barr....	36	15	3	1	7	7	..	..	..	..	..	..	..	..	..	1	3	..	..	..	1	..	4	3	..	2	..	..	3	..	3	1	1	13
Quarry Bank..	115	38	17	8	24	24	..	3	..	4	..	..	..	2	..	..	3	3	..	7	4	7	18	16	..	2	1	..	..	..	3	1	1	40
Rowley Regis.	172	89	20	22	150	133	16	6	24	6	6	5	..	4	28	13	2	2	2	24	15	19	47	36	..	4	4	1	27	3	38	28	3	229					
Rugeley	49	5	4	3	18	10	..	1	..	1	1	..	..	..	..	1	1	4	1	..	2	3	5	4	3	..	1	1	..	..	4	..	..	17
Sedgley	255	83	30	8	54	77	3	..	22	2	10	1	1	1	9	3	13	15	21	3	4	10	2	28	5	1	101						
Short Heath..	50	17	10	2	8	13	2	..	..	..	3	..	..	..	..	..	3	..	..	2	4	2	4	3	..	..	..	..	5	..	4	1	..	20
Smallthorne..	198	69	20	7	55	37	2	3	2	..	2	17	1	..	1	..	9	14	10	15	12	1	2	3	1	6	2	12	5	1	77					
Smethwick....	951	264	145	44	37	273	188	17	4	30	14	3	..	8	..	11	71	8	6	3	3	67	33	44	98	83	..	3	9	2	48	7	75	44	5	255					
Stafford	297	67	20	14	16	107	73	4	2	1	19	1	..	1	33	6	19	26	22	2	3	3	1	9	1	29	8	3	104						

URBAN—continued.

District.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.																				
	Census, 1901.	Estimated to middle of 1906.						Fevers.				Diphtheria and Membranous Croup.	Whooping Cough.	Scarlet Fever.	Measles.	Smallpox.	Typhus.	Enteric.	Other Continued.	Diarrhoea.	Phthisis.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Chlorosis of Liver.	Premature Birth.
Stoke-on-Trent {	30458	34496	18·8	29·6	13·3	136	1·50	..	..	0·26	0·15	0·11	..	0·06	0·92	0·49	0·66	1·10	0·95	0·06	0·03	0·11	0·43			
Stone	5680	5720	5·3	25·7	16·2	108	1·22	..	..	0·17	0·17	0·35	..	..	0·52	2·09	0·52	0·87	0·17	..	0·35	0·17	0·17	
Tanworth....	7271	7615	26·7	28·7	10·8	100	1·05	0·39	0·39	..	0·13	..	..	..	0·52	0·91	0·52	0·78	0·39	..	0·39	..	0·65		
Tettenhall....	5337	5441	4·4	20·7	13·4	115	0·91	..	..	..	0·36	..	..	..	0·55	1·28	0·73	0·55	0·91	..	0·18	0·36	..
Tipton	30543	31250	14·3	35·5	14·7	156	2·24	0·03	0·03	0·03	0·35	0·25	..	0·51	1·05	0·48	0·28	1·28	1·28	0·03	..	0·12	0·32					
Tunstall.....	24250	27850	15·9	35·6	17·3	184	1·79	0·14	0·14	0·07	0·46	0·32	..	0·10	0·68	1·11	0·64	1·14	1·43	..	..	0·07	0·71			
Uttoxeter	5133	5350	5·1	28·4	14·3	118	1·30	..	..	..	0·56	..	..	..	0·74	0·56	0·56	0·37	0·18	..	0·18	..	..			
Wednesbury ..	26554	27000	11·8	32·2	16·5	152	2·74	0·07	0·07	0·07	0·52	0·11	..	0·11	1·85	0·81	0·81	1·66	1·63	..	..	0·29	0·66			
Wednesfield ..	4883	5876	2·3	33·5	14·6	187	1·53	..	..	..	0·17	0·34	..	0·17	0·85	0·51	0·51	0·68	1·02	..	..	..	1·19
Willenhall....	18515	19460	15·5	30·2	18·6	164	3·08	0·72	0·15	0·15	0·25	..	..	0·15	1·74	1·49	0·46	1·28	1·02	..	0·20	0·10	0·46			
Wolstanton } United }	22645	26915	4·9	31·5	11·7	112	1·70	0·07	0·07	0·22	0·11	0·33	..	0·18	0·78	0·48	0·33	1·15	1·04	..	0·03	0·07	0·33					
Totals and Averages. }	682503	743636	7·6	31·9	15·8	149	2·15	0·19	0·19	0·11	0·41	0·16	..	0·12	1·16	0·94	0·62	1·40	1·03	0·02	0·17	0·15	0·62					
76 large towns in England, average population.	..	208136	*	27·8	15·9	145	2·24	0·40	0·12	0·12	0·28	0·19	0·09			1·16	*	*	*	*	*	*	*	*				

* Not given in Registrar General's Returns.

URBAN—continued.

District.	Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																													
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.		Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Typhus.	Fevers.			Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phtisis.	Other Tubercular Diseases.	Cancer. Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism.	Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases & Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.
							Measles.	Measles.					Enteric.	Other Continued.	Influenza.																					
Stoke-on-Trent	140	34	21	15	154	95	..	9	5	4	..	..	2	7	32	10	1	2	..	17	19	23	38	33	2	1	4	..	15	..	39	15	6	175
Stone	16	6	4	3	32	32	..	1	1	2	1	3	1	12	3	3	5	1	..	2	1	1	..	1	..	10	1	..	45	
Tamworth	22	9	2	2	26	22	1	4	1	7	2	4	6	3	..	3	3	..	5	..	5	..	7	2	1	34	
Tettenhall	13	4	1	4	26	25	..	..	2	..	..	..	..	4	3	1	..	..	7	1	4	3	5	..	1	1	2	..	..	..	9	3	..	28
Tipton	174	46	9	17	122	92	..	1	11	8	..	..	16	5	33	28	1	2	1	15	3	9	40	40	1	..	4	2	10	1	21	..	3	204
Tunstall	183	64	13	9	145	69	..	4	2	13	9	..	3	..	19	11	2	..	31	22	18	32	40	..	..	..	2	1	20	3	39	9	..	203
Uttoxeter	18	11	1	2	17	28	..	..	3	..	..	..	..	..	4	..	..	..	3	2	3	2	1	..	1	..	..	..	..	..	11	4	..	43
Wednesbury	133	60	15	16	135	86	..	2	2	14	3	1	3	10	50	4	1	2	..	22	..	22	45	44	..	..	8	2	18	3	33	8	2	147
Wednesfield	37	10	3	3	20	13	..	..	1	2	..	..	1	..	5	5	..	..	3	5	3	3	4	6	..	..	..	7	..	9	1	..	34	
Willenhall	97	65	17	17	106	60	..	3	5	..	2	..	3	4	34	2	4	2	1	29	15	9	25	20	..	4	2	..	9	4	26	5	1	138		
Wolverhampton	95	53	18	9	80	60	..	6	3	9	..	..	5	1	21	1	..	..	1	13	16	9	31	28	..	1	2	3	9	2	17	8	..	127
Totals	3552	1474	443	444	3417	2428	..	82	305	120	25	..	90	3	125	860	207	33	30	51	706	329	513	1046	773	16	131	117	38	465	69	880	315	63	4221	

RURAL.

District.	Population at all ages.		Mean area per person per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.																															
	Census, 1901.	Estimated to middle of 1906.						Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Fevers.			Diarrhoea.																							
													Typhus.	Enteric.	Other Continued.																								
Blore Heath...	2141	2102	6.4	20.4	13.7	46	0.47	..	..	0.05	..	0.47	..	..	..	..	1.90	0.95	0.47	0.47	0.47	..	..	..	0.25	0.15	..	..	0.40	0.17	0.85	0.70	0.70	0.42	..	0.14	1.31		
Cannock	17861	19360	2.6	26.0	10.5	93	0.46	..	..	0.05	0.10	0.10	..	0.05	..	0.15	0.41	0.41	0.82	0.56	0.56	0.05	..	..	0.15	0.17	0.40	..	..	0.17	0.42	0.25	0.25	0.14	0.14	0.14			
Cheadle	24657	24657	2.1	30.3	12.3	88	0.77	..	..	0.12	..	0.12	..	0.12	..	0.40	0.68	0.68	0.81	0.44	0.44	..	..	..	..	0.40	0.40	..	..	0.17	0.35	0.21	1.05	1.05	0.21	0.21	0.21	0.21	0.21
Eccleshall	5594	5610	5.8	22.1	11.4	48	0.17	..	..	..	..	..	..	..	..	0.17	0.71	0.53	0.53	0.35	0.35	..	..	..	..	0.17	0.17	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42
Gnosall	4697	4700	5.5	24.4	11.4	121	1.06	..	..	..	0.21	..	..	..	..	0.85	0.21	0.85	0.21	1.70	1.70	..	..	..	..	0.85	0.85	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42
Kingswinford.	19536	19990	0.2	31.6	16.9	172	1.50	..	..	0.10	0.20	0.05	..	0.10	..	1.05	0.90	0.30	1.85	1.05	1.05	..	..	..	..	0.90	0.90	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42
Leek	13873	14205	4.7	28.6	13.8	120	0.70	..	0.07	0.14	0.07	0.35	..	..	..	0.07	0.42	0.42	1.26	0.84	0.84	..	..	..	0.42	0.42	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42	
Lichfield	*25688	*26183	2.3	27.9	13.2	110	1.18	..	0.03	0.07	0.57	0.15	..	0.03	..	0.30	0.76	0.84	0.80	0.76	0.76	..	..	..	0.76	0.84	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42	
Mayfield	4054	4150	5.8	24.5	13.2	78	0.72	..	..	..	..	0.48	..	0.24	..	..	0.96	0.72	0.72	1.68	1.68	..	..	..	0.96	0.96	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42	
Newcastle	6513	6828	2.8	25.6	10.5	108	0.58	..	..	..	0.29	0.14	..	..	..	0.14	0.58	0.58	0.58	0.43	0.43	..	..	..	0.58	0.58	..	..	0.17	0.35	0.21	1.70	1.70	0.42	0.42	0.42	0.42	0.42	

* Not including 1000 Inmates of Burntwood Asylum.

RURAL—continued.

District.	Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																															
	Registered Births.	Deaths from all causes.						Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.	Fevers.			Epidemic Influenza.	Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism.	Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases & Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.
		Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.							Typhus.	Enteric.	Other Continued.																						
Blore Heath...	43	29	2	2	1	1	14	9	1	4	..	2	1	1	1	1	9	1	..	9	
Cannock.....	505	205	47	19	8	8	44	79	..	3	3	1	..	1	..	3	3	3	3	1	8	6	8	16	11	1	..	3	..	5	2	22	18	2	87	
Cheadle.....	749	305	66	20	11	13	94	101	..	2	3	2	3	..	2	10	4	..	1	2	17	12	17	20	11	1	10	3	51	12	3	118	
Eccleshall....	124	64	6	1	..	2	25	30	..	2	1	..	..	..	2	1	..	..	..	..	4	1	3	3	2	..	..	1	..	1	..	1	15	..	..	31
Gnosall	115	54	14	1	1	2	15	21	..	1	4	..	..	..	1	..	..	..	..	..	1	1	4	1	8	..	..	1	2	..	..	4	7	..	..	18
Kingswinford.	633	339	109	22	6	11	96	95	..	2	21	3	..	2	..	21	3	..	..	..	18	11	6	37	21	..	..	..	5	..	14	4	36	9	4	141
Leek	407	197	49	9	13	8	57	61	..	1	2	1	5	..	2	1	7	1	..	..	6	10	6	18	12	..	3	..	2	..	10	7	12	4	3	84
Lichfield.....	731	347	81	25	21	14	98	108	..	1	2	15	4	..	1	8	6	..	1	2	20	7	22	21	20	..	..	..	2	3	11	2	35	16	5	137
Mayfield.....	102	55	8	4	4	1	13	25	..	1	2	..	1	4	..	3	3	7	1	..	1	1	7	2	2	22	
Newcastle....	175	72	19	6	5	6	17	19	..	..	1	2	1	..	..	1	2	1	..	..	4	2	4	4	3	..	..	..	1	..	..	9	9	3	..	26
Seisdon	351	191	35	10	5	8	70	63	..	1	4	4	..	1	..	4	4	..	..	..	7	7	12	18	9	3	2	6	1	7	2	18	7	5	74	

RURAL—continued.

District.	Population at all ages.		Mean area per person per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.														
	Census, 1901.	Estimated to middle of 1906.						Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Fever.				Diarrhoea.					
													Typhus.	Enteric.	Other Continued.							
Seisdon	12897	13933	2·5	25·1	13·7	99	0·50	·	0·07	·	·	0·07	·	0·28	0·50	0·86	1·28	0·64	0·21	0·14	0·43	0·50
Stafford	10407	10860	4·7	23·3	13·1	78	0·36	·	0·09	·	·	0·09	·	0·18	0·46	0·64	1·10	0·92	·	0·09	·	0·36
Stoke-on-Trent }	4808	5013	0·8	34·5	13·5	179	0·79	·	·	·	·	·	·	0·59	0·19	0·19	2·59	0·99	·	0·39	0·19	0·99
Stone	8365	8600	4·2	23·6	14·0	93	0·69	·	·	·	0·23	0·23	·	0·23	0·81	0·69	0·81	0·34	0·11	0·23	·	0·46
Tanworth. } Staffs. portion }	4800	4834	4·5	26·9	15·9	76	1·24	·	0·20	·	0·62	·	·	0·20	0·41	1·65	2·06	0·62	·	0·41	·	·
Tutbury	9137	9150	2·7	25·1	11·5	73	0·43	·	·	·	0·10	·	·	·	1·42	1·09	0·87	1·09	0·10	·	·	·
Uttoxeter	8128	8340	5·7	24·2	9·8	59	0·12	·	·	·	·	·	·	0·12	0·59	0·71	1·07	0·12	0·12	0·24	·	0·47
Walsall	10290	11015	1·1	28·0	12·6	84	1·63	·	0·36	0·18	0·36	·	·	0·09	0·36	0·90	0·27	1·72	·	·	0·09	0·72
Totals and Averages }	193446	199530	3·5	27·2	13·0	105	0·81	·	0·05	0·06	0·17	0·11	·	0·05	0·65	0·67	1·02	0·78	0·03	0·07	0·12	0·48

RURAL—continued.

District.	Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																															
	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.	Fevers.			Epidemic Influenza.	Diarrhoea.	Enteritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism.	Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases & Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.	
													Typhus.	Enteric.	Other Continued.																							
Stafford	20	5	5	6	39	68	1	..	..	..	1	1	..	..	1	2	..	..	..	..	..	5	3	7	12	10	..	1	..	..	..	4	..	13	7	8	67
Stoke-on-Trent }	31	5	5	2	16	9	1	..	..	..	..	..	..	..	..	3	3	..	..	..	..	1	1	1	13	5	..	2	1	..	..	5	..	6	4	..	22
Stone	19	10	4	3	29	56	..	..	..	2	2	..	..	..	1	2	3	..	..	..	7	4	6	7	3	1	2	..	..	..	..	4	..	12	5	1	59
Tamworth }	10	8	2	5	16	36	3	1	1	1	1	..	1	2	8	8	10	3	..	2	1	7	3	..	24
Staffs. portion }	17	8	3	3	40	35	..	..	..	1	..	..	..	..	..	3	..	2	..	1	13	..	10	8	10	1	..	..	..	..	..	..	12	3	..	42	
Tutbury	12	4	1	2	24	39	..	..	..	..	..	1	..	..	..	1	5	..	..	..	5	3	6	9	1	1	2	..	..	..	1	4	1	8	2	1	31
Uttoxeter	26	25	8	4	36	40	..	4	2	4	..	..	..	1	..	7	..	1	..	1	1	4	10	10	3	19	..	..	..	1	8	1	12	6	..	45	
Walsall .....							..	10	12	35	23	6	..	11	..	19	72	41	5	4	7	130	86	135	204	156	7	15	25	6	96	25	291	102	34	1037	
Totals....	571	184	103	99	743	894	..	10	12	35	23	6	..	11	..	19	72	41	5	4	7	130	86	135	204	156	7	15	25	6	96	25	291	102	34	1037		
	5436	2594																																				
	Registered Births.																																					
	Deaths from all causes.																																					

INFANTILE MORTALITY DURING THE YEAR 1906.

Deaths from stated Causes in Weeks and Months under One Year of Age.

URBAN.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
Common Infectious Diseases.	Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox ..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	2
	Measles ..	..	..	..	..	..	..	..	2	2	..	2	4	5	9	4	3	31
	Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	1	5
	Diphtheria : Croup	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	3
Diarrhoeal Diseases.	Whooping Cough	..	1	2	5	8	7	15	15	9	11	11	9	12	12	8	13	130
	Diarrhoea, all forms	..	3	10	14	28	57	86	86	55	64	46	42	48	34	33	25	604
	Enteritis, Muco-enteritis, Gastro-Enteritis	1	5	8	10	24	14	22	22	12	17	9	9	11	6	10	10	166
	Gastritis, Gastro-intestinal Catarrh...	..	..	1	3	4	7	3	2	3	3	4	4	1	..	..	..	31
	Premature Birth..	360	33	36	17	446	21	2	1	..	2	..	..	..	..	..	..	472
Wasting Diseases.	Congenital Defects	60	32	14	8	134	14	11	6	1	1	1	1	2	..	..	..	171
	Injury at Birth ..	16	1	..	..	17	..	..	..	..	..	..	..	..	..	..	..	17
	Want of Breast-milk—Starvation	..	..	1	..	1	..	..	3	..	2	..	..	1	..	..	..	7
	Atrophy, Debility, Marasmus	107	38	43	41	229	88	71	62	37	25	21	15	9	13	13	5	598

URBAN—continued.

CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
Tuberculous Diseases.	Tuberculous Meningitis ..	..	..	..	..	..	3	4	2	1	2	2	5	5	4	5	33
	Tuberculous Peritonitis : Tabes Mesenterica	..	..	..	..	3	4	4	14	8	9	3	6	5	6	4	66
	Other Tuberculous Diseases ..	..	..	..	1	4	6	4	7	1	5	2	4	5	3	4	46
Erysipelas ..	..	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	4
Syphilis ..	..	..	..	2	5	5	11	1	5	3	..	1	..	1	..	..	32
Rickets ..	..	..	..	..	1	..	1	1	..	..	1	..	1	1	..	..	6
Meningitis (not Tuberculous) ..	..	..	..	2	2	3	2	3	4	11	7	10	2	7	4	5	60
Convulsions ..	66	24	17	19	126	50	41	20	16	16	13	16	5	9	7	8	327
Bronchitis ..	2	3	9	17	31	28	29	22	18	21	23	16	20	20	19	19	266
Laryngitis ..	1	..	..	1	2	..	..	..	1	..	..	1	..	..	1	..	5
Pneumonia ..	1	1	1	1	4	6	15	11	9	13	19	19	19	21	19	21	176
Suffocation, overlaying ..	4	1	2	4	11	10	4	8	5	1	..	..	..	..	..	1	40
Other Causes ..	50	12	8	20	90	26	14	26	14	19	17	11	12	6	11	18	264
	690	157	152	165	1164	345	340	306	214	219	192	166	164	155	144	143	3552

INFANTILE MORTALITY DURING THE YEAR 1906.

Deaths from stated Causes in Weeks and Months under One Year of Age.

RURAL.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
Common Infectious Diseases.	Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Chicken-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
	Scarlet Fever ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	Diphtheria : Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Diarrhoeal Diseases.	Whooping Cough	...	...	...	...	...	...	6	1	...	3	1	2	...	...	3	...	18
	Diarrhoea, all forms	...	1	...	1	2	3	7	5	2	4	3	3	2	2	1	1	35
	Enteritis, Muco-Enteritis, Gastro-Enteritis	...	...	1	...	1	4	4	6	6	3	4	1	1	1	1	2	34
	Gastritis, Gastro-intestinal Catarrh...	...	...	...	...	...	1	1	...	...	1	1	1	...	1	...	...	6
	Premature Birth...	66	1	3	4	74	6	2	2	...	...	...	...	...	...	...	...	84
Wasting Diseases.	Congenital Defects	16	5	2	...	23	4	...	2	...	...	...	1	...	1	...	...	31
	Injury at Birth ...	7	...	1	...	8	...	...	...	...	...	...	...	...	...	...	...	8
	Want of Breast-milk—Starvation	3	...	...	...	3	...	...	1	...	...	...	...	...	...	...	...	4
	Atrophy, Debility, Marasmus	21	10	6	5	42	12	11	4	4	2	3	2	3	2	...	1	86

RURAL—continued.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
Tuberculous Diseases.	Tuberculous Meningitis	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	4
	Tuberculous Peritonitis: Mesenterica	Tabes	..	..	..	..	1	..	1	1	..	..	2	..	..	1	..	6
	Other Tuberculous Diseases	..	..	..	..	..	..	..	2	..	..	1	..	..	..	2	..	5
Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Syphilis	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Rickets ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meningitis (<i>not Tuberculous</i>)	..	..	..	..	..	1	..	..	1	2	1	4	..	..	1	1	4	15
Convulsions	..	..	6	1	26	4	3	8	6	6	1	4	2	1	1	3	5	64
Bronchitis	..	..	2	..	2	3	4	6	4	4	5	3	2	7	2	2	2	42
Laryngitis	..	..	1	..	1	..	..	..	..	2	1	..	..	..	..	..	..	4
Pneumonia	..	..	..	1	3	6	2	2	2	2	4	8	5	6	3	2	..	43
Suffocation, overlaying	..	..	1	..	2	1	..	..	..	..	..	..	..	..	..	..	..	3
Other Causes	..	..	1	..	13	5	5	2	2	1	..	1	2	4	1	1	2	37
		143	24	22	13	202	51	47	44	31	25	34	23	25	15	19	18	534*

* The above total does not correspond with the total in the general Rural table because the needful information was not obtainable in the case of Seisdon Rural District.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
BILSTON.* 24,400. 16/1. 47·2.	Cases	Under 5 5 & upwards ..	32 75	3 4	3 1	..	15	..	..	3	..	20		
	Deaths	Under 5 5 & upwards ..	1	3	3	..	5	..	..	1	..	1	15	23
	Cases treated in hos- pital	Under 5 5 & upwards ..	61											
	Cases	Under 5 5 & upwards ..	18 35	3 5	3 2	..	18	..	..	2	..	3		
BRIERLEY HILL.* 12,946. 18/6. 41·7.	Deaths	Under 5 5 & upwards ..	1	2	2	..	..	..	..	..	..	1	..	12
	Cases treated in hos- pital	Under 5 5 & upwards ..	32	..	..	..	1							
	Cases	Under 5 5 & upwards ..	38	6	..	..	6	..	..	2	..	22		
	Deaths	Under 5 5 & upwards ..	3	2 1	2 1	..	..	..	..	1	..	1	11	23
BROWNHILLS.* 17,126. 10/9. Nil.	Cases treated in hos- pital	Under 5 5 & upwards ..	47 93	36 53	..	..	2 23	..	..	6	..	18		
	Cases	Under 5 5 & upwards ..	4	3	7 3	..	9	..	..	3	..	..	29	1
	Deaths	Under 5 5 & upwards ..	88	44	..	..	17						1	
	Cases treated in hos- pital	Under 5 5 & upwards ..												
BURSLEM.* 42,294. 16/5 53·6.	Cases	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..	..

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
CANNOCK.* 25,000. £1 10s. 1d. Nil.	Cases	Under 5 5 & upwards	..	91 160	5 1	2 1	..	1 ..	..	..	4 ..	..	5 32		
	Deaths	Under 5 5 & upwards	..	..	2 1	..	..	..	..	..	1 ..	..	1 2	..	18 1
	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	65 94	7 9	1 ..	..	1 24	..	..	2 ..	..	17		
COSELEY. 22,250. £1 4s. 8d. Nil.	Deaths	Under 5 5 & upwards	..	5 2	3 ..	..	..	1 5	..	..	1 ..	..	..	..	8
	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	9 18	5 8	1 ..	..	17	..	..	5 ..	..	16		
	Deaths	Under 5 5 & upwards	..	..	1 1	..	..	3 ..	..	..	2 ..	..	..	5	2
DARLASTON.* 15,730. 12/6. Nil.	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	68 125	44 121	2 ..	..	13	..	..	3 ..	..	14		
	Deaths	Under 5 5 & upwards	..	1 9	9 8	..	..	1 ..	..	..	1..	..	..	..	..
	Cases treated in hos- pital	Under 5 5 & upwards	..	81 ..	33 1	1 ..	..	1	..	..	..	..	..	..	..
FENTON.* 25,758. £1 17s. 10d. 31·0.	Cases	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
HANDSWORTH.* 66,276. 13/2. 24·0.	Cases	Under 5 ... 5 & upwards	.. 61 173	10 47	1	1	.. 11	.. 11	.. 1	.. 2	.. 2	..	3 40		
	Deaths	Under 5 ... 5 & upwards	.. 3 2	2	2	..	.. 3	.. 3	.. 3	.. 3	.. 3	..	1 1	3 30	1
	Cases treated in hos- pital	Under 5 ... 5 & upwards	.. 73	73	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 ... 5 & upwards	.. 4 21	4 21	3	..	.. 2	.. 2	.. 2	.. 2	.. 2	..	9		
HEATH TOWN.* 11,053. 9/3. 81·2.	Deaths	Under 5 ... 5 & upwards	.. 1	1	..	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	.. 3	3
	Cases treated in hos- pital	Under 5 ... 5 & upwards	.. 24	24	1	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	..	..
	Cases	Under 5 ... 5 & upwards	.. 19 35	19 35	1	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	5		
	Deaths	Under 5 ... 5 & upwards	.. 2	2	..	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	.. 2	2
KIDSGROVE. 8,871. 17/2. 23·6.	Cases treated in hos- pital	Under 5 ... 5 & upwards	.. 4 9	4 9	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 ... 5 & upwards	.. 16 25	16 25	4 25	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	12		
	Deaths	Under 5 ... 5 & upwards	.. 1	1	..	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	1	.. 9	9
	Cases treated in hos- pital	Under 5 ... 5 & upwards	.. 36	36	25	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	..	..
LEEK.* 16,314. 12/8. 87·3.	Cases	Under 5 ... 5 & upwards	.. 36	36	25	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	..	..
	Deaths	Under 5 ... 5 & upwards	.. 1	1	..	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	1	.. 9	9
	Cases treated in hos- pital	Under 5 ... 5 & upwards	.. 36	36	25	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	..	..
	Cases	Under 5 ... 5 & upwards	.. 36	36	25	..	.. 1	.. 1	.. 1	.. 1	.. 1	..	..	..	..

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.	Cases†		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Bubonic Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
LICHFIELD.* 7,902. 16/1. 65·2.	Cases†	Under 5 5 & upwards	...	8	14	..	..	1	..	..	1	..	9		
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	1	4	6
	Cases treated in hos- pital	Under 5 5 & upwards	...	4	11	..	..	..	..	..	..	..	1	..	1
	Cases	Under 5 5 & upwards	..	45 18 105	38 1	..	..	3 28	1	..	..	..	23	3	
LONGTON.* 36,797. 18/- 49·1.	Deaths	Under 5 5 & upwards	..	2	1	..	..	1	..	..	..	..	1	5	13
	Cases treated in hos- pital	Under 5 5 & upwards	...	87	22	..	..	8							
	Cases	Under 5 5 & upwards	...	80	13	..	..	21	..	..	2	..	20		
	Deaths	Under 5 5 & upwards	..	2	1	..	..	..	..	..	..	..	1	..	3
NEWCASTLE.* 20,500. 16/7. 58·7.	Cases treated in hos- pital	Under 5 5 & upwards	...	48	8	..	..	11							
	Cases	Under 5 5 & upwards	..	5	1										
	Deaths	Under 5 5 & upwards	..	8	1										
	Cases treated in hos- pital	Under 5 5 & upwards	...	12											
PERRY BARR.* 2,370. 14/3. 85·7.	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital	Under 5 5 & upwards	...	12											
	Cases	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..

† Chicken-pox 18 Cases.

URBAN—continued.

District. Population. Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	(Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping (Cough.
SHORT HEATH. 3,808. 6/6. Nil.	Cases	Under 5 .....	..	3	..	..	..	..	..	..	..	..	2	..	..
	Deaths	Under 5 .....	..	..	..	..	..	..	..	..	..	..	..	2	..
	Cases treated in hos- pital	Under 5 .....	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 .....	..	30	9	1	..	10	..	..	2	..	12	..	..
SMALLTHORNE.** 12,243. £1 9s. 2d. 13·2.	Deaths	Under 5 .....	..	44	35	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital	Under 5 .....	..	2	1	2	..	2	..	..	..	..	1	..	..
	Cases	Under 5 .....	..	3	6	..	..	8	..	..	..	..	..	..	..
	Cases†	Under 5 .....	..	98	31	4	..	1	..	..	..	..	5	..	..
SMETHWICK.* 65,000. 19/-. Nil.	Deaths	Under 5 .....	..	175	94	..	..	33	..	..	6	..	47	..	..
	Cases treated in hos- pital	Under 5 .....	..	4	7	7	..	8	..	..	6	..	2	17	30
	Cases	Under 5 .....	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases†	Under 5 .....	..	13	1	..	..	6	..	..	..	..	6	..	..
STAFFORD.* 21,322. 7/1. 81·8.	Deaths	Under 5 .....	..	..	1	..	..	..	..	..	..	..	..	..	4
	Cases treated in hos- pital	Under 5 .....	..	45	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 .....	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases†	Under 5 .....	..	..	..	..	..	..	..	..	..	..	..	..	..

† Phthisis 13 Cases (voluntary). * * Isolation Hospital for Milton and Chell.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fever. Typhus.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
STOKE-ON-TRENT.* 34,496. £1 3s. 2d. 39·3.	Cases	Under 5 5 & upwards	59 111	18 59	..	..	1 28	1	..	3	..	1 39	..	..
	Deaths.....	Under 5..... 5 & upwards	..	5 4	3 1	..	2	..	..	1	..	1 1	..	5
	Cases treated in hos- pital.....	Under 5 5 & upwards	..	68 30	..	..	11	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	46 36	..	..	..	..	..	..	..	1	..	..
STONE.* 5,720. £1 16s. 3d. 37·8.	Deaths.....	Under 5 5 & upwards	..	1 2	..	..	..	..	..	..	..	..	..	1
	Cases treated in hos- pital.....	Under 5 5 & upwards	31	..	..	..	..	..	..	..	..	..	..	..
	Cases†	Under 5 5 & upwards	1 2	4	..	..	2	..	..	..	..	3	..	..
	Deaths.....	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	3	1
TAMWORTH.* 7,615. 15/9. 60·0.	Cases treated in hos- pital.....	Under 5 5 & upwards	2 2	2	..	..	2	..	..	..	..	..	..	..
	Cases†	Under 5 5 & upwards	9 44	7	..	..	..	..	..	1	..	7	6	..
	Deaths.....	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	2
	Cases treated in hos- pital.....	Under 5 5 & upwards	..	25	1	..	..	..	..	..	..	..	..	..
TETTENHALL.* 5,441. £1 15s. 4d. 42·6.	Cases treated in hos- pital.....	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths.....	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital.....	Under 5 5 & upwards	..	25	1	..	..	..	..	..	..	..	..	..
	Deaths.....	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..

† Chicken-pox, 35 cases.

‡ Chicken-pox, 2 cases.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
TIPTON.* 31,250. 14/9. 42·6.	Cases	Under 5 ... 5 & upwards	19 39	3 21	9 3	..	47 7	..	..	2 ..	..	4 31		
	Deaths	Under 5 ... 5 & upwards	..	1 6	..	..	16 ..	..	..	1 ..	..	2 ..	1	11
	Cases treated in hos- pital	Under 5 ... 5 & upwards	..	25	..	..	33							
	Cases	Under 5 ... 5 & upwards	..	37 33	22 43	4 2	2 10	..	..	1 ..	..	5 27		
TUNSTALL.* 27,850. 16/8. 38·7.	Deaths	Under 5 ... 5 & upwards	..	2 7	2 ..	..	3 ..	..	..	..	..	2 ..		13
	Cases treated in hos- pital	Under 5 ... 5 & upwards	..	23	..	..	6							
	Cases	Under 5 ... 5 & upwards	..	2	..	..	..	..	..	..	..	1		
	Deaths	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	3
UTTOXETER. 5,350. 1/4. Nil.	Cases treated in hos- pital	Under 5 ... 5 & upwards	..	78	47	1	16	..	..	6	..	37		
	Cases	Under 5 ... 5 & upwards	..	2	3	..	2	..	..	..	..	2	2	13
	Deaths	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	1
	Cases treated in hos- pital	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..
WEDNESBURY.* 27,000. 17/1. Nil.	Cases	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..
	Deaths	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 ... 5 & upwards	..	..	..	..	..	..	..	..	..	..	..

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
WEDNESFIELD.* 5,876. 17/- 2·7.	Cases	Under 5 5 & upwards }	33	3	..	..	1	..	..	..	3		
	Deaths	Under 5 5 & upwards }	..	2	..	..	1	..	..	..	..	..	1
	Cases treated in hos- pital	Under 5 5 & upwards }	1										
	Cases	Under 5 5 & upwards }	39	3	..	..	1	..	5	..	21		
WILLENHALL.* 19,460. £1 7s. 4d. 0·5.	Deaths	Under 5 5 & upwards }	2	..	..	..	3	..	4	..	2	14	5
	Cases treated in hos- pital ..	Under 5 5 & upwards }	1										
	Cases	Under 5 5 & upwards }	59	17	..	..	2	..	..	..	4		
	Deaths	Under 5 5 & upwards }	115	49	..	..	14	..	..	..	17		
WOLSTANTON.* 26,915. £1 5s. 8d. 47·2.	Deaths	Under 5 5 & upwards }	4	7	..	..	5	..	..	..	..	2	3
	Cases treated in hos- pital	Under 5 5 & upwards }	89	28	..	..	4						

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
GNOSALL. 4,700. 1/7 Nil.	Cases	Under 5 5 & upwards	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	1	..	2		
	Deaths	Under 5 5 & upwards	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	1	1	
	Cases treated in hos- pital	Under 5 5 & upwards												
	Cases	Under 5 5 & upwards	.. ..	15 23	3 3	.. ..	.. ..	8	.. ..	.. ..	.. ..	1 10		
KINGSWINFORD.* 19,990. 7/10. 57'6.	Deaths	Under 5 5 & upwards	.. ..	2	1	.. ..	.. ..	2	.. ..	.. ..	.. ..	.. ..	.. ..	4
	Cases treated in hos- pital	Under 5 5 & upwards	.. ..	25	.. ..	.. ..	.. ..	5						
	Cases	Under 5 5 & upwards	.. ..	17 28	10 24	.. ..	.. ..	.. ..	.. ..	2	.. ..	3		
	Deaths	Under 5 5 & upwards	.. ..	1 1	3 2	.. ..	.. ..	.. ..	.. ..	1	.. ..	1	1	
LEEK.* 14,205. 14/9 44'3.	Cases treated in hos- pital	Under 5 5 & upwards	.. ..	35										
	Cases	Under 5 5 & upwards	.. ..	44 110	10 35	.. ..	.. ..	2	.. ..	1	.. ..	13		
	Deaths	Under 5 5 & upwards	.. ..	2	2	.. ..	.. ..	1	.. ..	.. ..	.. ..	.. ..	14 1	
	Cases treated in hos- pital	Under 5 5 & upwards	.. ..	35	4	.. ..	.. ..	1						
LICHFIELD.* 26,183. £1 0s. 6d. 19'9.	Cases	Under 5 5 & upwards	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
	Deaths	Under 5 5 & upwards	.. ..	2	2	.. ..	.. ..	1	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
	Cases treated in hos- pital	Under 5 5 & upwards	.. ..	35	4	.. ..	.. ..	1						
	Cases	Under 5 5 & upwards	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
STOKE-ON-TRENT.* 5,013. £1 2s. 5d. 32-5.	Cases	Under 5 5 & upwards	..	1 14	4 18	1	..	3	..	..	..	..	4		
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	1	
	Cases treated in hos- pital	Under 5 5 & upwards	..	13		..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	38	37	..	..	1	..	..	..	..	1		
STONE.* 8,600. £1 2s. 4d. 25-0.	Deaths	Under 5 5 & upwards	..	2		..	..	..	..	..	..	..	..	2	
	Cases treated in hos- pital	Under 5 5 & upwards	..	19	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	2	6	1	..	1	..	..	..	..	1	4	
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	1	1	3
TAMWORTH.* 4,834. 9/3. 10-0.	Cases treated in hos- pital	Under 5 5 & upwards	..	1	..	..	..	1	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	6	14	3	..	1	..	..	..	..	6	..	
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	1
	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
TUTBURY.* 9,150. 8/2. 37-5.	Cases	Under 5 5 & upwards	..	9	..	..	..	..	..	..	..	..	..	..
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	1
	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..

† Chicken-pox 3 Cases.

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
			Under 5 5 & upwards	.. 1	6	..	..	..	..	..	..	..	10		
UTTOXETER. 8,340. 5/4. Nil.	Cases		Under 5 5 & upwards	.. 1	6	..	..	..	..	..	..	..	10		
	Deaths		Under 5 5 & upwards												
	Cases treated in hos- pital		Under 5 5 & upwards												
	Cases		Under 5 5 & upwards	.. 5	13	1	..	1	..	..	1	..	3		
WALSALL. 11,015. 5/5. Nil.	Deaths		Under 5 5 & upwards	.. 1	1	..	..	1	..	..	1	..	..	3	4
	Cases treated in hos- pital		Under 5 5 & upwards	.. 1	1	..	..	1	..	..	1	..	..	3	1
	Cases		Under 5 5 & upwards												
	Cases		Under 5 5 & upwards												

District, Population, &c.	Dwelling-houses and Schools.				Lodging-houses	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse and manure.	Water-closets.	House drainage.			Ligstles.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Unwholesome food.				Food and Drugs Act.				Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Foul conditions	Structural defects.	Overcrowding.	Unit for habitation.										Defective Traps.	No discon- nection.	Other faults.							Water supply.	Prosecutions for exposing for sale.	Convictions for exposing for sale.	Samples taken for analysis.	Number found adulterated, &c.	Proceedings taken.	Number of convictions.	Samples of water taken for analysis.	Sam- ples of water condemned as unfit for use.	Lot of infected bedding disinfected or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
AMBLECOTE (3,329).	Inspections and observations made	3	1	1	27	5	16	...	1	22	2	10	1	6	106</

* Sale of milk stopped. † Inspected quarterly.

* Periodically inspected about 24 times per year. † All that were practicable.

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District, Population, &c.	Dwelling-houses and schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughterhouses.	Canal Boats.	Aberies and Privies.	Deposits of refuse and manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.
	Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective traps.	No dis- infection.	Other faults.							
BURSLEM (42,294).	1729	124	307	108	311	288	314	2300	50	1914		1230	12	50	14	55	70	8876					
Inspections and observations made																							
Defects found..	16	64	10	17	10	7	10	7	29	203	14	914	12	24	235	8	11	7	2	51	1651		
Informal notices by inspector	16	64	10	17	10	7	10	7	29	203	14	467	12	24	235	8	11	7	2	51	1204		
Formal notices by authority	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	4		
Nuisances abated after notice by inspector	16	64	10	15	10	7	10	7	29	203	14	463	12	24	235	8	11	7	2	51	1198		
Ditto by authority ..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	4		
CANNOCK (25,000).																							
Inspections and observations made	100	20	80	119	31	829	121	3521	24	33		38	12	15	59	80	5082						
Defects found..	29	11	45	4	10	3	84	6	4	58	93	2	5	6	22	382							
Informal notices by inspector	6	10	..	..	..	1	3	27	6	18	30	..	4	..	..	105							
Formal notices by authority	6	..	..	..	..	..	..	21	1	10	20	2	1	..	..	61							
Nuisances abated after notice by inspector	29	11	45*	4	10	3	84	6	4	151	2	5	6*	22	382								
Ditto by authority ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12							
COSELEY (22,250).																							
Inspections and observations made	1234	13	72	64	26	73	248	184	6	89	26	8	7	2050									
Defects found..	1969	2	380	8	3	18	184	6	53	8	7	2638											
Informal notices by inspector	130	2	..	4	3	16	86	6	24	26	5	7	309										
Formal notices by authority	98	..	32	1	..	..	..	98	10	2	241												
Nuisances abated after notice by inspector	1321	2	..	3	3	16	86	6	20	26	5	7	1495										
Ditto by authority ..	514	..	321	5	..	..	91	..	8	2	941												

* Without notice.

Food and Drugs Act.	Unwholesome food.	Precautions against infectious disease.			
		No. of seizures.	Condemned by Magistrate.	Prosecutions for exposing for sale.	Convictions for exposing for sale.
Samples taken for analysis.	Number found adulterated, &c.	Proceedings taken.	Number of convictions.	Samples of water taken for analysis.	Lot of infected bedding disinfected or destroyed.
..	Houses disinfected after infectious disease.
..	Schools disinfected after infectious disease.
..	Prosecutions for not notifying existence of infectious disease.
..	Convictions for not notifying existence of infectious disease.
..	Prosecutions for exposure of infected persons or things.
..	Convictions for exposure of infected persons or things.

District.	Population.	&c.
DARLASTON (15,730).		
Inspections and observations made	17	8 19 3 ...
Defects found.. .. .	17	8 19 3 ...
Informal notices by inspector	13	8 15 ...
Formal notices by authority	4	... 4 3 ...
Nuisances abated after notice by inspector	...	...
Ditto by authority	14	4 11 3 ...
FENTON (25,758).		
Inspections and observations made	73	30 7 ...
Defects found.. .. .	23	12 ...
Informal notices by inspector	14	12 3 ...
Formal notices by authority	8	7 1 ...
Nuisances abated after notice by inspector	12	5 2 ...
Ditto by authority	8	7 1 ...
HANDSWORTH (66,276).		
Inspections and observations made	467	475 61 53 ...
Defects found.. .. .	151	151 13 14 ...
Informal notices by inspector	151	151 13 14 ...
Formal notices by authority	17	14 8 ...
Nuisances abated after notice by inspector	131	135 5 14 ...
Ditto by authority	11	10 8 ...

[illegible]

District, Population, &c.	Dwelling-houses and Schools.			Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughterhouses.	Canal Bots.	Ashpits and Privies.	Deposits of refuse and manure.	Water-closets.	House drainage.				Pigs.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.			
	Foul conditions.	Structural defects.	Overcrowding.										Urn for ventilation.	Defective Traps.	No discon- nection.	Other faults.							Water supply.		
LICHFIELD (7,902).																									
Inspections and observations made	17	36	2	6	12	54	27	50	...	77	15	25	38	30	79	8	20	4	8	3	25	539			
Defects found..	17	36	1	1	...	2	...	15	...	77	15	28	38	30	79	4	20	1	2	1	25	392			
Informal notices by inspector	17	36	1	1	...	2	...	2	...	77	15	28	38	30	79	4	20	1	2	1	25	379			
Formal notices by authority	15	30	...	1	...	2	...	13	...	77	15	28	38	30	79	4	20	1	2	1	25	381			
Nuisances abated after notice by inspector	...	6	1	...	...	...	...	2	...	...	...	...	...	...	...	...	3	...	...	...	5	17		
Ditto by authority	15	30	...	1	...	2	...	13	...	60	15	25	35	23	70	4	12	1	2	1	20	337			
LONGTON (36,797)																									
Inspections and observations made	11	40	22	...	37	21	35	104	61	...	110	26	121	3	10	250	8	6	...	8	270	1149			
Defects found..	20	64	5	...	9	1	...	34	13	...	154	17	117	5	15	237	2	2	4	...	362	1051			
Informal notices by inspector	20	48	5	...	8	1	1	34	10	...	11	17	117	5	15	227	2	...	4	...	362	887			
Formal notices by authority	3	16	...	...	1	2	...	2	...	...	175	...	24	...	13	7	...	1	...	...	48	292		
Nuisances abated after notice by inspector	20	49	5	...	11	1	19	36	10	...	7	17	125	5	12	209	...	1	...	...	325	862		
Ditto by authority	3	15	...	...	...	1	2	...	...	...	126	...	22	...	13	6	...	1	...	...	38	230		
NEWCASTLE (20,500).																									
Inspections and observations made	40	30	2	40	36	65	520	12	148	8	6	5	1	28	...	4	14	12	...	26	997		
Defects found..		
Informal notices by inspector		
Formal notices by authority	40	30	2	8	6	...	1	148	8	6	5	1	28	...	4	14	26	327		
Nuisances abated after notice by inspector		
Ditto by authority	40	36	2	...	...	...	6	...	1	127	8	6	5	1	28	...	4	14	...	...	26	298		
																					</				

* Including factories and workshops.

[illegible]

[illegible]

*5c. 2q. 14lbs. fish condemned by request of owner.

[illegible]

[illegible]

[illegible]

District, Population, &c.	Dwelling houses and schools.				Lodging-houses.	Milkshops and Cowsheds.	Bakehouses.	Slaughterhouses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse and manure.	House drainage.			Pigsties.	Animals in-property kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.		
	Faulty conditions.	Structural defects.	Overcrowding.	Unfit for habitation.								Defective traps.	No disconnection.	Other faults.							Water supply.	
ECCLESHALL (5,610).	Inspections and observations made	...	...	...	2	61	8	7	...	...	...	...	...	...	...	...	...	...	...	78	
	Defects found..	2	4	1	...	9	2	...	...	25	73	...	9	...	...	...	...	...	162		
	Informal notices by inspector	1	2	...	...	...	2	...	...	8	32	...	5	...	...	...	...	...	61		
	Formal notices by authority	1	2	1	...	9	...	...	...	17	41	...	7	...	...	...	...	...	101		
	Nuisances abated after notice by inspector	1	2	...	...	...	2	...	...	8	32	...	5	...	...	...	...	...	61		
	Ditto by authority	1	2	1	...	7	...	...	...	15	39	...	4	...	...	...	...	...	89		
	GNOSALL (4,700).	3	1	3	...	...	41	...	10	33	16	8	1	19	...	102	19	12	1	277	
Inspections and observations made	3	1	3	...	...	7	...	1	4	8	4	1	8	...	17	4	2	...	8	71	
Defects found..	3	1	3	...	...	7	...	1	...	8	2	1	4	...	17	4	2	...	7	60	
Informal notices by inspector	...	1	1	...	...	...	...	...	4	2	2	...	4	...	5	...	1	...	1	21	
Formal notices by authority	3	...	2	...	...	7	...	1	...	6	2	1	4	...	12	4	1	...	7	50	
Nuisances abated after notice by inspector	...	1	1	...	...	...	...	...	4	...	2	...	4	...	5	...	1	...	1	19	
Ditto by authority	...	1	1	...	...	...	...	...	4	...	2	...	4	...	5	...	1	...	1	...	
KINGSWINFORD (19,990).	Inspections and observations made	159	46	3	6	...	7	88	45	114	43	94	18	48	8	18	4	1	42	744
	Defects found..	178	58	3	9	...	1	17	20	6	8	105	48	8	18	...	1	42	522
	Informal notices by inspector	159	46	3	6	...	1	17	18	6	8	94	18	48	...	18	4	1	42	489
	Formal notices by authority	19	6	1	2	16	5	8	1	8	68
	Nuisances abated after notice by inspector	134	40	2	4	...	1	17	18	6	8	74	18	43	...	17	4	1	27	414
	Ditto by authority	16	5	1	2	14	5	8	1	6	60
	

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RURAL—continued.

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